3.6.3 Tasks

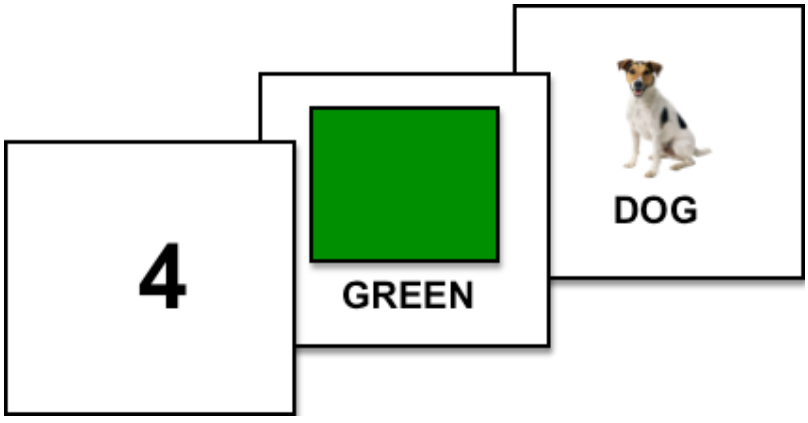
At the beginning of the session, participants gave written consent to take part and to be videotaped in the study. Information about the experiment was provided by the researcher in BSL and in written English. In addition, participants were asked to complete a short questionnaire about their sign language use, as they had already completed a detailed questionnaire containing their demographic information as part of the BSL Corpus Project. Participants not associated with the Corpus Project were asked to complete the same demographic questionnaire issued to Corpus Project participants. The researcher assisted participants with the questionnaire ensuring that all questions were fully understood and answered. After completing the questionnaire and consent forms, participants engaged in the following tasks: 1) a lexical elicitation task (10-15 minutes), 2) a spot-the-difference task (maximum of 36 minutes), 3) a lexical comprehension task (20-25 minutes) and finally, 4) a post-task interview (10-15 minutes). Before each task commenced, participants were presented with the task instructions in a video format and signed in BSL by a deaf native BSL signer as well as a copy of the instructions in written English. An example of the instructions for each task is included in Appendix C. The use of regional signs in the instructions was kept to a minimum to avoid any influence on the tasks thereafter. Three high definition video cameras were set-up throughout: one camera to focus on each individual and a third camera filming the pair of signers.

.1.1.1 Lexical elicitation task

In order to establish the variants used by participants on a daily basis for the target concepts elicited as part of the main conversational task, participants completed a lexical elicitation task preceding the main task. Participants were shown a series of 40 PowerPoint slides

which displayed an image of the target concept and the nearest equivalent English word shown underneath (for example, for the concept *green*, they were shown a green block square with the printed word 'green' underneath as in Figure 19). Twelve of these concepts were the same as those elicited as part of the main conversational task and an additional six colours were elicited for investigation as part of the lexical comprehension task (i.e., *black*, *blue*, *orange*, *pink*, *red* and *white*). The remaining 21 items served as distracters. These lexical items were taken from the Swadesh list that has been modified for use with sign languages (Woodward, 1978). Participants were instructed to produce their sign variant for the displayed concept that they use most on a daily basis. In addition, participants were asked specifically in the instructions and by the researcher present to produce any other signs they knew for that concept (e.g., regional, informal/formal variants). The first sign produced was considered to be the signer's default variant, unless the signer stated explicitly that another variant was the one they use most on a daily basis. The signer's default variant and all other variants produced during the task were analysed and compared to the variant they produced with the confederate during the main conversational task.

Figure 19: Lexical elicitation task stimuli for Study 2: Participants produced signs in response to each of these slides



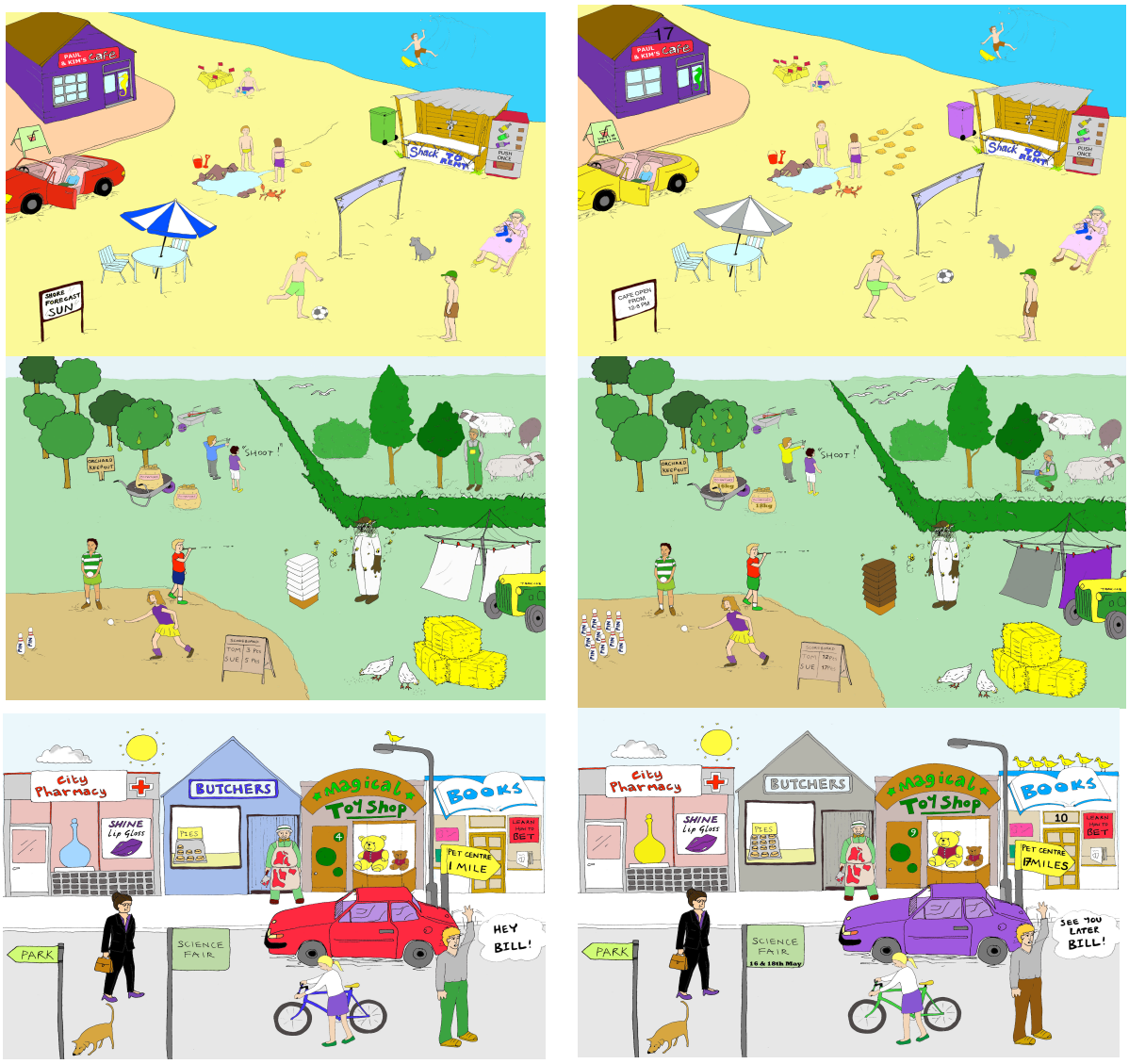
3.6.3.1 Diapix task

Spoken language studies on the phenomenon of accommodation are almost entirely restricted to an experimental paradigm. This study is effectively a compromise between the experimental designs of psycholinguistics and the tendency to collect naturalistic discourse in sociolinguistics, in that it engages participants in a conversational task whilst controlling for certain attributes. A dialogue-based picture-matching task (Diapix) was used (Baker & Hazan, 2011). The aim of this spot-the-difference task was to find all of the differences between versions A and B of a specially designed cartoon picture by conversing with a partner. Participants were only able to see one of the two picture scenes and therefore the task involves describing each picture scene in detail. The current study generally follows the same methodology as other studies that have used the DiapixUK task (e.g., Evans & Alshangiti, 2011). In Evans and Alshangiti's (2011) study, participants converse via a telephone. This is not possible with deaf participants and therefore a number of adaptations were made to the methodology.

Originally created by Van Engen and colleagues (Van Engen et al., 2010), the Diapix task elicits a large amount of spontaneous language data whilst also allowing the researcher to control the key words produced in conversation. This has since been adapted for use in British English research, the DiapixUK task (see Baker & Hazan, 2011). The DiapixUK task was used as the template and adapted by the researcher to meet the requirements of this study. There were three picture scenes in total including a beach, farm and street scene. The picture scenes were altered to include five differences in colours and six differences in numbers and one difference unrelated to colour or number as shown in

Figure 20. As described in Study 1, colour and number signs show considerable regional variation in BSL and hence the aim of the adapted picture, version B, is to elicit these target signs during the conversation. The target concepts elicited were the following colours: *brown, green, grey, purple* and *yellow* and the following numbers: *four, nine, six, ten, twelve, seventeen* and *eighteen*. For the concepts *four* and *nine*, version A included four of a particular object and version B included nine of the same object. Some signers produce the same variant for FOUR and NINE (see **Figure 17**, page 106). When both participant and confederate produced the same variant for *four* and *nine*, this created an opportunity to investigate how signers disambiguate homonyms in BSL.

Figure 20: DiapixUK task materials adapted for use in BSL. Top: Beach scene; Middle: Farm scene; Bottom: Street scene (Version A on left; version B on right). (originally designed for the DiapixUK corpus and permission granted by Baker & Hazan, 2011 to adapt them for use in this project).



Participants and the confederate were informed that the task was a 'spot-the-difference' game in which they had to identify 12 differences between the two picture scenes without being able to see both scenes. The participant and confederate sat opposite one another with their picture scene displayed in front of them, each blocked from view of the other (see Figure 21).

Participant-confederate pairs were given 12 minutes to find the differences in each pair of scenes. In cases in which the task was not completed in the allocated time that part of the task was discontinued and the pair of signers started the next picture scene. Therefore, the conversation could last for a maximum of 36 minutes. Each picture scene was printed on A3 and presented in a laminated cover. One of the pair was given a black marker pen to circle the differences identified. This enabled dyads to follow their progress over the course of the task and finally to inform the researcher when all differences had been identified. This role was alternated between participant and confederate for each picture scene. For consistency, the instructions asked the participant and confederate to start describing their picture from the top left hand corner of the picture. Once the instructions had been explained, the researcher left the participant and confederate alone. The researcher returned after 12 minutes or when informed by the confederate that the task was complete.

Figure 21: Confederate (left) and participant (right) during the Diapix task with stimuli displayed in the middle

.1.1.2 Lexical comprehension task

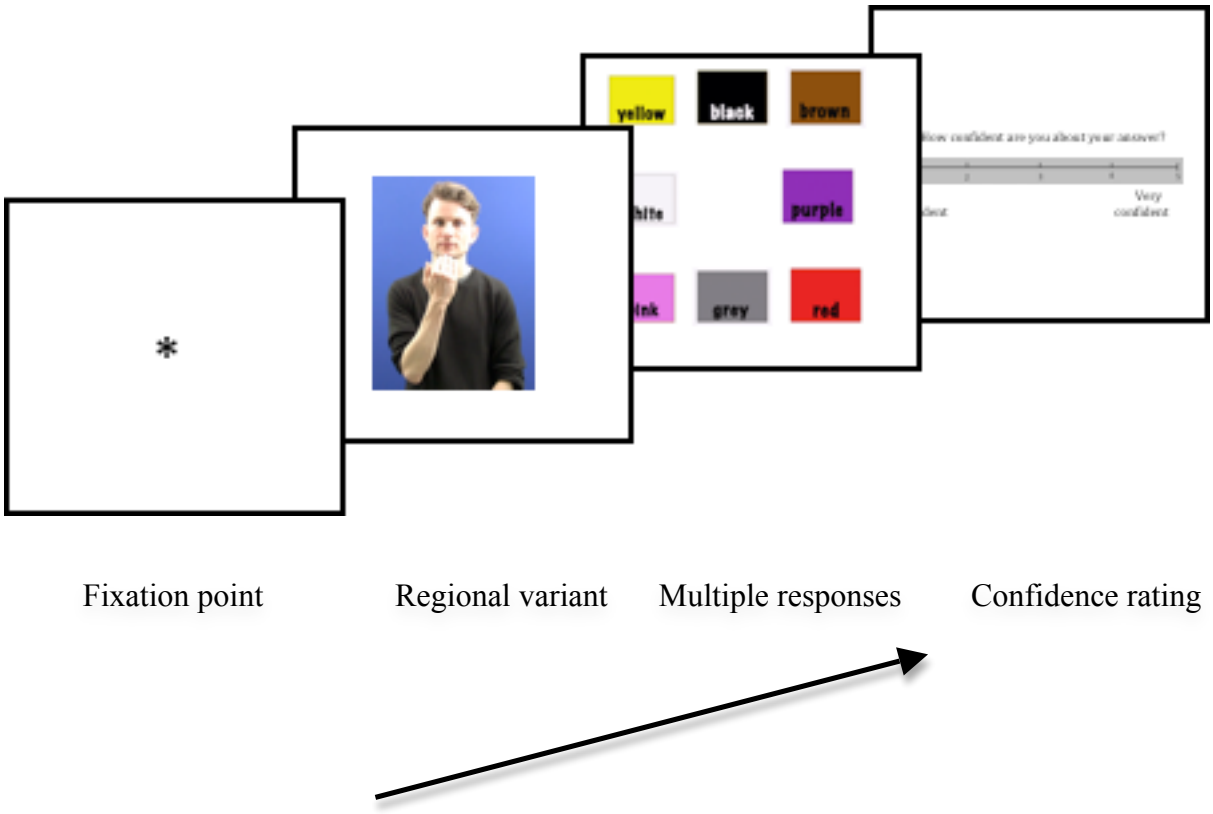
The aim of the lexical comprehension task was to establish a participant's comprehension of BSL regional variants. In this task, participants were asked to choose the answer that best matched the meaning of the sign. Of the semantic categories known to show considerable regional variation (e.g., colours, countries, numbers), colour signs were selected because the meaning of the sign is not as transparent in its form compared to number and country signs (e.g., the sign for *three* usually involves extension of three digits). The colour sign variants were chosen from the lexical elicitation task data as part of the BSL Corpus Project as representing either the most frequent or the traditional variant used in each of the eight original collection sites (as discussed in section 2.3.3.3).

The experimental trials were presented on E-Prime, version 2.0.9.22 (Schneider, Eschman, & Zuccolotto, 2002). Before each trial, participants were first shown a fixation point to draw their attention to the screen in preparation for the forthcoming sign. Then, participants were shown a BSL regional variant for one of the following colour signs: *brown*, *green*, *grey*, *purple* and *yellow*. A deaf native BSL signer signed the stimuli. As one study indicated that as much as 51% of all mouth actions in BSL are mouthings (Crasborn, Van der Kooij, Waters, Woll, & Mesch, 2008), the stimuli were produced without mouthings to avoid signers using the mouthing to disambiguate the meanings of signs. When the sign was completed, participants were shown eight different coloured square blocks with the equivalent English word displayed on them (i.e., *black*, *brown*, *green*, *grey*, *purple*, *red*, *white* and *yellow*). Participants were asked to select from a closed set of answers the response they felt best matched the meaning of the BSL sign viewed on the preceding screen. Following this, participants were asked to rate how confident they were about their answer on a scale from one to five, one being 'not confident' and five being 'very confident' (this Likert scale was used by Ikeno & Hansen, 2007, in an accent perception & comprehension study). Participants responded by pressing keys on a computer keyboard. The procedure is shown in Figure 22. Participants ran three practice trials to become accustomed to the task. In the practice trials, participants were shown two signs with which they were likely to be familiar and one sign that was less commonly known. At the end of the three practice trials, participants were offered the choice of continuing to the real task or repeating the practice trials.

Participants were informed that all signs were examples of regional variants. They were warned to expect to see signs that they may not understand but to respond as quickly

and accurately as possible so that their responses were instinctive. In instances where the participant had never seen the sign before they were encouraged to indicate this by giving a '1' score in the confidence rating. This was a self-paced task in which participants completed 47 trials (i.e., one block), repeated in three blocks (141 trials overall) with each block randomised for each participant. Participants were given a break after each block and were able to re-commence the task at their will. The position of the colour responses on the screen was kept constant for each participant to avoid the chance of errors. Four separate experiments were created with different colour positions and randomly distributed to participants in each region to avoid any position effect.

Figure 22: Procedure for lexical comprehension experiment starting with a fixation point, followed by the target sign, eight possible answers to choose from and a confidence rating scale



3.6.3.2 Interview with participants

In the final task, participants were interviewed about their experience in the three preceding tasks. In particular, participants were asked whether they were conscious of changing their signs during the conversational task and why they may or may not have changed their signs. In addition, participants were asked questions about BSL variation and change, for example, "are there any regions in the UK for which you find the signing difficult to understand?" The interview data were only partially analysed as part of this project due to time and translation restrictions. A list of the interview questions are presented in Appendix D.

3.6.3.3 Debrief with confederate

After participants had completed the tasks, the researcher and confederate discussed any issues that arose during the course of the filming. The confederate was asked to rate the participant for familiarity and engagement during the task. Engagement was ranked from "0" to "10" with "0" representing a passive or minimal involvement in the task and "10" representing an active involvement in the task. It was hypothesised that those individuals with a low engagement rating, who did not participate in the conversation to a great extent, would not accommodate as much as those who were fully engaged. Familiarity was included as a variable to indicate how well the confederate knew each participant prior to the experiment. The ratings were "0" if the confederate had never met the participant, "1" if they had met once or twice, "2" if they knew the participant or "3" if they knew the participant very well. The familiarity and engagement ratings are presented in Table 9.

Table 9: Confederate's ratings for familiarity and engagement for all participants

Participant	Familiarity rating (0-3)	Engagement rating (1-10)
1	0	7
2	0	9
3	2	6
4	0	4
5	0	8
6	0	8
7	0	7
8	2	4
9	2	9
10	1	7
11	0	1
12	0	6
13	0	6
14	0	8
15	0	8
16	1	1
17	0	8
18	0	1
19	0	7
20	0	9
21	0	9
22	0	7
23	0	9
24	0	8
25	0	6

3.7 Data Coding

For the accommodation data, all examples of regional variants for numbers and colours were coded using ELAN as discussed in section 2.3.3 (Crasborn & Sloetjes, 2008; ELAN, 2012). The same coding system was used as described in Study 1 in section 2.3.3. The dependent variable was whether the elicited regional sign variant exhibited accommodation or not. The criteria for accommodation are discussed in section 3.7.1. One of the aims of this study is to consider how accommodative behaviour and lexical comprehension ability

correlate with participants' social factors. The following variables investigated here were introduced in Study 1, section 2.3.3.4: signers' regional background (Belfast, Glasgow, Manchester, Newcastle), age (continuous variable), gender (female, male), social class (middle, working), language background (deaf, hearing) and school location (local, non-local). The semantic category of the sign (colour, number) was included as the only linguistic factor.

In addition, the following variables were investigated as part of the current study: mobility (high, low), familiarity rating (0, 1, 2, 3) and a rating for engagement during the task (1-10). The mobility of participants was included as a variable in this task with the prediction that high mobility individuals may exhibit higher levels of accommodative behaviour. Clopper and Pisoni (2004) defined individuals as 'mobile listeners' if they had lived in at least three different states in the US and 'non-mobile listeners' if they had lived in one place for their entire lives. Similar to Clopper and Pisoni's (2004) criteria, participants in this current study were considered to be 'high' mobility individuals if they had lived in at least three different regions of the UK, 'medium' mobility if they had lived in two different parts of the UK and 'low' mobility individuals if they had remained in the greater area of their home region for their entire lives. In the analysis, the 'medium' and 'high' mobility categories were combined to form a single 'high' mobility category leaving only 'high' and 'low' categories. The familiarity and engagement ratings were obtained in a post-task debriefing with the confederate, as discussed above (section 3.6.3.3). Age and the degree of engagement were included as continuous variables.

For the lexical comprehension task, the dependent variable was whether the participant correctly identified the meaning of the regional sign or not. All of the same

factors as above were analysed (excluding the semantic category of the sign, familiarity and engagement rating). The regional origin of the sign variant was also analysed to determine which regions were better recognised than others (Belfast, Birmingham, Bristol, Cardiff, Glasgow, London, Manchester and Newcastle). Block (1, 2, 3) was also included as a variable. Participants completed three repeated blocks in the task with an expectation that performance may improve over repeated blocks.

3.7.1 Accommodation criteria

In the analysis of the accommodation data, every production of a regional variant (i.e., colour or number sign) was coded for whether it exhibited accommodation. Variants produced in the Diapix task by the participant were compared to those elicited as part of the preceding lexical elicitation task by the participant. The sign variant explicitly stated as being the participant's own variant that they use on a daily basis in the lexical elicitation task was considered to be their 'default' variant. However, all other variants produced in the lexical elicitation task by the participant were taken into account during the accommodation coding process. When the participant did not produce their default variant, their actual production was compared to the variant used by the confederate. In general, the confederate produced sign variants that were traditional for Bristol and therefore most of the colour and number variants were different from the traditional variants used by each participant. A summary of the accommodative, non-accommodative and divergent strategies is shown in Table 10 (see page 156). Following Giles' (1973) terminology for various forms of speech modifications, those variants matching the participant's 'default' variant were coded as 'normative' (*normative*), one example of 'non-accommodation'. Other forms of non-accommodation include: (2) repeating the confederate's sign as a

means of clarification where there is a misunderstanding and without mouthing (*confusion*); (3) repeating the confederate's variant immediately after they produced it similar to a form of backchannelling (*mirroring*); and (4) repeating the confederate's variant on a separate occasion 'practice' (*practice*) when discussing the variant itself. Divergence was coded when the participant produced a variant other than those elicited in the lexical elicitation task and different from the confederate's variant (*deviance*).

Behaviour was considered to be accommodative when a participant: (1) initiated the use of the confederate's variant in another instance, not directly after the confederate produced it (*accommodation*); (2) used the confederate's variant to clarify the variant meaning without any misunderstandings and with the use of mouthing (*clarification*); (3) used the confederate's variant blended with their own variant (*blending*); (4) produced the confederate's variant incorrectly (*misreplication*); (5) produced a different sign to their preferred variant and the confederate produced a different sign to their preferred variant yet the end product is the same variant for both interlocutors (*switching*); and (6) used a different sign altogether to any variant produced in the lexical elicitation task and the confederate produced a different sign to their preferred variant (*merging*). The end product for both *switching* and *merging* is convergence but it is not possible to establish who initiated this convergence.

Table 10: Accommodative, non-accommodative and divergent strategies

Accommodation	Non-accommodation
Accommodative	Normative
Clarification	Confusion
Blending	Mirroring
Misreplication	Practice
Switching	
Merging	
[redacted]	
Divergent	
Deviance	

The dependent variable for the accommodation study was whether the regional sign variant produced exhibited accommodation or not. The following social factors were investigated: signers' regional background, gender, age, language background, social class, school location, mobility, familiarity rating and engagement rating. Semantic category of the sign was also investigated as the only linguistic factor. The dependent variable for the lexical comprehension task was the participants' performance. The following variables were investigated: signers' regional background, gender, age, language background, social class, school location, mobility, regional origin of the sign and the experimental block that the variant occurred.

3.8 Data analysis

In this study, the dependent variables for both the accommodation and lexical comprehension tasks were binary, making it appropriate for analysis using Rbrul. A multiple logistic regression was used to analyse the data in Rbrul. In the accommodation study, data showing convergent and divergent behaviour were amalgamated as 'accommodative' therefore making the dependent variable 'accommodation' or 'non-

accommodation.' Participant and lexical item were included as random effects to account for individual variation and variation that is subject to the lexical items under investigation.

3.9 Results

3.9.1 Accommodation

On average**,** participants spent 9 minutes and 33 seconds on each Diapix picture. The average total amount of time for each participant to complete the task was 28 minutes 39 seconds. On average female pairs completed the task in 28 minutes and 16 seconds and mixed-sex pairs in 29 minutes and 7 seconds. In general, performance in the Diapix task elicited a moderate number of regional sign variants for analysis. For the 25 Diapix tasks, a total of 2710 tokens were elicited for analysis. Of these, only 14% of tokens (i.e., 374) exhibited accommodative behaviour (participants' range of accommodation: 0-18%) and 86% (i.e., 2336 tokens) exhibited non-accommodative behaviour.

3.9.2 Variation according to social and linguistic factors

The dataset was analysed using a multiple logistic regression to consider the relationship between the degree of accommodation exhibited by participants and the following social factors: signers' regional background, gender, age, language background, social class, school location, mobility, familiarity rating and engagement rating. The semantic category of the sign (colour or number) was also included in the analysis to investigate whether colour or number signs were more prone to accommodation. Participant and lexical item were included as random effects. **Table 11** presents the results for all of the factors including the log odds, number of tokens analysed and the centred weight (with participants' accommodation as the application

value). Factors presented first in the table and with an asterisk were significant at a p-value less than 0.05. Results with a positive log-odd and a factor weight over 0.5 indicate an increased likelihood to favour accommodative behaviour while a negative log-odd and a factor weight below 0.5 indicate an increased likelihood to disfavour accommodative behaviour.

Table 11: Multiple logistic regression results for the accommodation task (participant data)

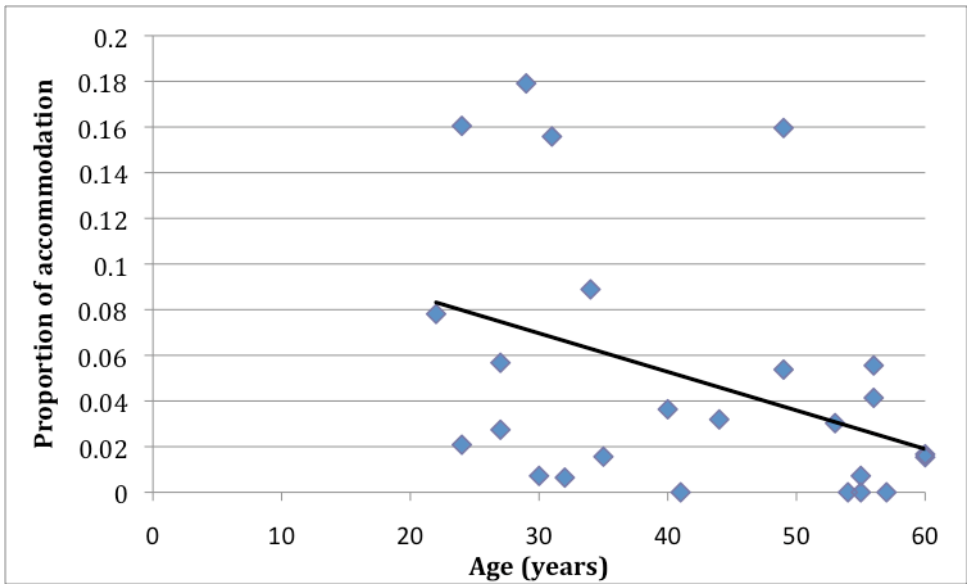
Application value: Accommodation. *Factor groups are significant at $p<.05$.
2710 tokens.

Factor Group	Factor	Log odds	% of accommodation	Tokens	Centred weight
*Region	Glasgow	1.985	37.4	530	0.879
	Manchester	0.644	16.9	682	0.656
	Belfast	-1.057	3.6	781	0.258
	Newcastle	-1.572	4.6	717	0.172
*Age (+1)	(continuous)	-0.053			
Gender	Male	0.423	18.8	1184	0.604
	Female	-0.423	9.9	1526	0.396
Semantic category	Number	0.205	16.6	489	0.551
	Colour	-0.205	13.2	2221	0.449
Mobility	High	0.21	23.0	1118	0.552
	Low	-0.21	7.3	1592	0.448
Language background	Deaf	0.136	15.1	865	0.534
	Hearing	-0.136	13.2	1845	0.466
Social class	Working	0.15	11.6	1642	0.537
	Middle	-0.15	17.1	1068	0.463
Engagement (+1)	(continuous)	0.029			
Familiarity	0 (never met)	0.267	10.2	2171	0.566
	1 (met once)	0.051	33.8	373	0.513
	2 (know)	-0.317	15.7	166	0.421
School location	Local	0.075	10.5	1811	0.519
	Non-local	-0.075	20.5	899	0.481

Degrees of freedom = 7, Mean = 0.138, Intercept = -0.266, Deviance = 1521.008. Random effects (participant) standard deviation = 1.231. Random effects (lexical item) standard deviation = 1.231.

Of the social factors under investigation, two were found to be significant: signers' regional background and their age. The regional background of the participant was the most significant predictor of accommodative behaviour with those participants from Glasgow and Manchester favouring accommodative behaviour and participants from Belfast and Newcastle disfavouring accommodative behaviour (Factor weights, Glasgow = 0.879, Manchester = 0.656, Belfast = 0.258 and Newcastle = 0.172). Paired samples t-tests were performed to see if there was a significant difference between the results for these regions. The results show that there was a significant difference in the degree of accommodation between signers from Glasgow (M=2.1774, S.D.=0.58547) and Manchester (M=2.077, S.D.=0.403); $t(1210)=3.502$, $p<0.001$. There was also a significant difference between signers from Manchester and Belfast (M=1.994,SD=0.189); $t(1461)=5.127$, $p<0.001$. However, there was no significant difference in the degree of accommodation between signers from Belfast and Newcastle (M=1.990,SD=0.214); $t(1496)=0.445$, $p=0.657$.

Age was the second most important factor. Age was analysed as a continuous variable and therefore the results displayed in the table indicate that as the age variable increases (as shown by '+1'), the degree of accommodation decreases (-0.053 log odds). This is displayed in Graph 2 below, which shows the proportion of accommodation plotted against age. It indicates that younger signers accommodated more than older signers.



Graph 2: Age and proportion of accommodation (number of examples of accommodative behaviour out of the total number of opportunities for accommodation) indicating that accommodative behaviour decreases with age

Gender, semantic category, mobility, language background, familiarity, engagement, school location and social class were not found to be significant predictors of accommodation. This study is more concerned with the data from the participants recruited; however, the confederate's data also provides interesting results as she was present in all of the experiments across four regions creating a considerable number of tokens which all relate to the same social factors for the confederate but which vary as an effect of the social factors of her interlocutor. Of the 3437 tokens produced by the confederate, 6% (i.e., 214 tokens) exhibited accommodation (confederate's range of accommodation: 0-16%) and 94% (i.e., 3223 tokens) exhibited non-accommodation. The same social and linguistic factors were investigated; however, in this case the social factors are those of the interlocutor rather than the confederate herself to see how the participant's social factors affected her behaviour.

Table 12 presents the results for all of the factors including the log odds, number of tokens analysed and the centred weight (with confederate's accommodation as the application value).

Table 12: Multiple logistic regression results for the accommodation task (confederate data)

Application value: Accommodation. *Factor groups are significant at $p<.05$. 3437 tokens.					
Factor Group	Factor	Log odds	% of accommodation	Tokens	Centred weight
*Region	Glasgow	0.810	11.2	652	0.692
	Belfast	0.427	12.2	934	0.605
	Newcastle	-0.325	7.2	877	0.419
	Manchester	-0.911	4.3	974	0.287
*Familiarity	0 (never met)	0.924	9.4	2825	0.716
	1 (met once)	-0.142	4.8	208	0.465
	2 (know)	-0.781	4.2	404	0.314
Language background	Deaf	0.135	7.2	1131	0.534
	Hearing	-0.135	9.2	2306	0.466
School location	Non-local	0.104	8.8	1072	0.526
	Local	-0.104	8.4	2365	0.474
Social class	Middle	0.075	6.2	1337	0.519
	Working	-0.075	10.0	2100	0.481
Gender	Female	0.057	9.3	1974	0.514
	Male	-0.057	7.5	1463	0.486
Engagement (+1)	(continuous)	0.013			
Mobility	Low	0.019	9.5	2034	0.505
	High	-0.019	7.0	1403	0.495
Age (+1)	(continuous)	0.001			
Semantic category	Colour	0.02	8.6	2987	0.505
	Number	-0.02	8.0	450	0.495
Degrees of freedom = 8, Mean = 0.085, Intercept = -3.763, Deviance = 1661.014. Random effects (participant) standard deviation = 0.464. Random effects (lexical item) standard deviation = 1.3.					

The results reveal that two factors predict the confederate's accommodative behaviour: the participant's regional background and the confederate's familiarity rating for

the participant. When the confederate interacted with participants from Glasgow and Belfast she accommodated more than when she interacted with participants from Newcastle and Manchester (Factor weights, Glasgow = 0.692, Belfast = 0.605, Newcastle = 0.419, Manchester = 0.287). Paired samples t-tests were performed to see whether the accommodative behaviour exhibited when interacting with signers from these regions was significantly different across regions. The results show that there was a significant difference in the degree of accommodation when interacting with signers from Glasgow (M=1.95, SD=0.331) and Belfast (M=1.92, SD=0.339); $t(1584)=2.096$, $p=0.036$. There was also a significant difference between the confederate's accommodation towards signers from Belfast and Newcastle (M=2.00, SD=0.268); $t(1809)=-5.706$, $p<0.001$. Finally, there was a significant difference in the confederate's degree of accommodation towards signers from Newcastle and Manchester (M=1.97,SD=0.206); $t(1849)=-2.311$, $p=0.021$. The confederate accommodated most to signers from Glasgow, followed by signers from Belfast then signers from Newcastle and finally the confederate accommodated the least with signers from Manchester.

Familiarity rating was the second most significant predictor of the confederate's accommodative behaviour. The confederate accommodated more when she interacted with unfamiliar participants than when she interacted with familiar participants (Factor weights, "0" familiarity rating 'never met' = 0.716, "1" rating 'met once' = 0.465, "2" rating 'know' 0.314). Language background, school location, social class, gender, engagement, mobility, age and semantic category were not found to be significant.

3.9.3 Lexical comprehension task

Overall accuracy scores on the lexical comprehension task were low. On average, participants correctly identified the meaning for 38% (i.e., 1029 tokens) of signs (range: 21-50%). One participant chose not to complete the lexical comprehension task; therefore, only data from 24 participants was analysed.

3.9.3.1 Regional comprehension differences

To investigate the comprehension of different regional signs, the data were organised into score proportions by region (e.g., proportion of correctly identified signs associated with Belfast, say). The total number of tokens for the lexical comprehension task was 3384 (47 trials x 3 blocks x 24 participants). Proportions were calculated by dividing the number of sign variants exhibiting accommodative behaviour by the total number of opportunities for accommodation (i.e., the total number of regionally bound signs). A repeated measures analysis of variance with regional score as the within-subjects variable revealed that there was a significant main effect of sign region, $F(7,140=12.583$, $p<0.001)$. A repeated measures ANOVA with region as the between-subjects variable and the regional score as the within-subjects variable found that there was a significant sign region and region of residence interaction, $F(28,140=11.909$, $p<0.001)$. There was no main effect of region $F(4,20=0.467$, $p=0.759)$.

All participants performed best identifying the meanings of signs from their own region (e.g., Belfast participants had higher scores for Belfast signs). As a result, in order to investigate which regional signs participants understood most, other than their own, tokens where participants (e.g., Manchester signers) were viewing signs from their own region (e.g., signs associated with the Manchester region) were removed (i.e., 390). A further 288 tokens were removed as these signs were not associated with one particular region (e.g.,

single manual letter signs such as YELLOW). The data were organised with each token representing an individual trial. A total of 2706 responses were analysed. Table 13 presents the results for the lexical comprehension task showing the log odds, number of tokens and the centred weight for each factor (with correct response as the application value). Gender, mobility, school location, block, social class, age and participant's region were not found to be significant.

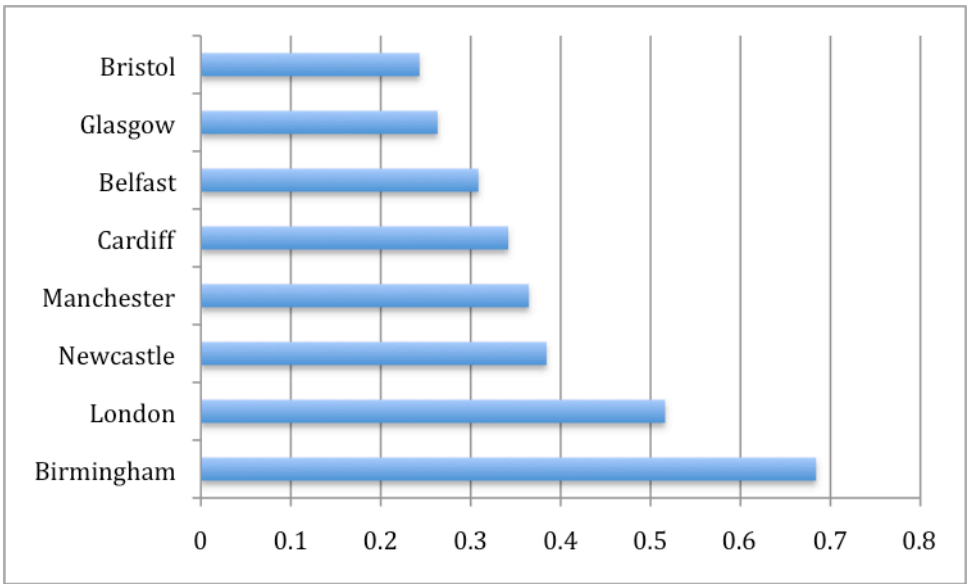
Table 13: Multiple logistic regression results for the lexical comprehension task

Application value: Correct response. *Factor groups are significant at $p<.05$. 2706 tokens.					
Factor Group	Factor	Log odds	% of correct responses	Tokens	Centred weight
*Region of sign	Birmingham	1.363	68.4	288	0.796
	London	0.523	51.6	432	0.628
	Newcastle	-0.079	38.4	216	0.48
	Manchester	-0.095	36.5	255	0.476
	Cardiff	-0.119	34.2	360	0.47
	Belfast	-0.353	30.9	324	0.413
	Bristol	-0.617	24.3	432	0.35
	Glasgow	-0.624	26.3	399	0.349
*Language background	Deaf	0.176	42.8	906	0.544
	Hearing	-0.176	35.6	1800	0.456
Gender	Female	0.121	39.3	1461	0.53
	Male	-0.121	36.5	1245	0.47
Mobility	High	0.177	40.2	1236	0.544
	Low	-0.177	36.2	1470	0.456
School location	Local	0.106	37.5	1806	0.527
	Non-local	-0.106	39.1	900	0.473
Block	Three	0.074	39.6	902	0.518
	Two	-0.010	37.8	902	0.497
	One	-0.063	36.7	902	0.484
Social class	Middle	0.067	40.5	1017	0.517
	Working	-0.067	36.5	1689	0.483
Age (+1)	(continuous)	0.003			
Region	Belfast	0.041	38.9	666	0.51
	Manchester	0.020	39.7	798	0.505
	Newcastle	0.010	35.6	702	0.502
	Glasgow	-0.070	37.6	540	0.482
Degrees of freedom = 11, Mean = 0.38, Intercept = -0.386, Deviance = 3335.673. Random effects (participant) standard deviation = 0.28. Random effects (lexical item) standard deviation = 0.232.					

Two significant factors were found to predict performance in the lexical comprehension task: region of the sign ($p<0.001$) and language background ($p=0.0413$). Signs from Birmingham and London were easier to understand (Factor weights,

Birmingham = 0.796, London = 0.628, Newcastle = 0.48, Manchester = 0.476, Cardiff = 0.47, Belfast = 0.413, Bristol = 0.35, Glasgow = 0.349). The second significant predictor was language background. Participants with deaf parents performed better at the lexical comprehension task than participants with hearing parents (Factor weights, deaf = 0.544, hearing = 0.456).

Seven post-hoc independent-samples t-tests were performed to see if the differences across these regions were significant. Using a Bonferroni correction, a critical p-value of 0.007 was used (i.e., p=0.05 has been divided by 7). The results show that the difference in mean accuracy scores between Birmingham (M = 0.68, S.D. = 0.47) and London (M = 0.52, S.D. = 0.50) is significant (t(718)=4.532, p<0.001). The difference between London and Newcastle (M = 0.38, S.D. = 0.49) was also found to be significant (t(646)=3.192, p=0.001). The difference between Newcastle and Manchester (t(469)=0.436, p=0.663), Manchester (M = 0.36, S.D. = 0.48) and Cardiff (t(613)=.589, p=0.556), Cardiff (M = 0.34, S.D. = 0.47) and Belfast (t(682)=0.919, p=0.358) and Bristol (M = 0.24, S.D. = 0.44) and Glasgow (M = 0.26, S.D. = 0.43) was not significant (t(829)=-0.666, p=0.506). After applying the Bonferroni correction, the comparison between Belfast (M = 0.31, S.D. = 0.46) and Bristol (t(754)=2.010, p=0.045) was not found to be significant. This suggests that, aside from participants' own regional signs, Birmingham colour signs are the second easiest to understand across all regions (see Graph 3).



Graph 3: The mean scores for the sign variants by regional origin

To investigate why Birmingham colour signs appear to be most easily understood compared to other BSL regional varieties, an Rbrul analysis was run to show how each variant correlated with accuracy in order of performance (from easiest to understand to most difficult to understand). Appendix E shows the variants that participants found easiest to understand and Appendix F shows the Rbrul results for the analysis. One pattern that emerged is that six of the ten easiest variants to comprehend also incorporated an element of BSL or ISL fingerspelling in the sign. For example, one variant for the concept *yellow* fingerspells the initial letter of the concept twice (i.e., Y-Y). Fingerspelling is a feature of BSL enabling signers to spell out English words, such as names and places. In the example mentioned, a signer from any regional background can easily guess the meaning of the colour sign as the fingerspelling of 'y' narrows down the options to colours incorporating that letter. As the fingerspelling alphabet is commonly known by all BSL users, the meaning of variants that incorporate fingerspelling properties is more transparent than those that do not. In order to investigate this further, another Rbrul analysis was undertaken

excluding all variants that incorporate elements of fingerspelling. The results for six variants (a total of 345 tokens) were removed from the lexical comprehension task. An analysis excluding these variants revealed that the same two social factors predict signers' performance on the lexical comprehension task: region of sign and language background (see Table 14).

Table 14: Follow-up multiple logistic regression results for the lexical comprehension task without variants incorporating aspects of fingerspelling

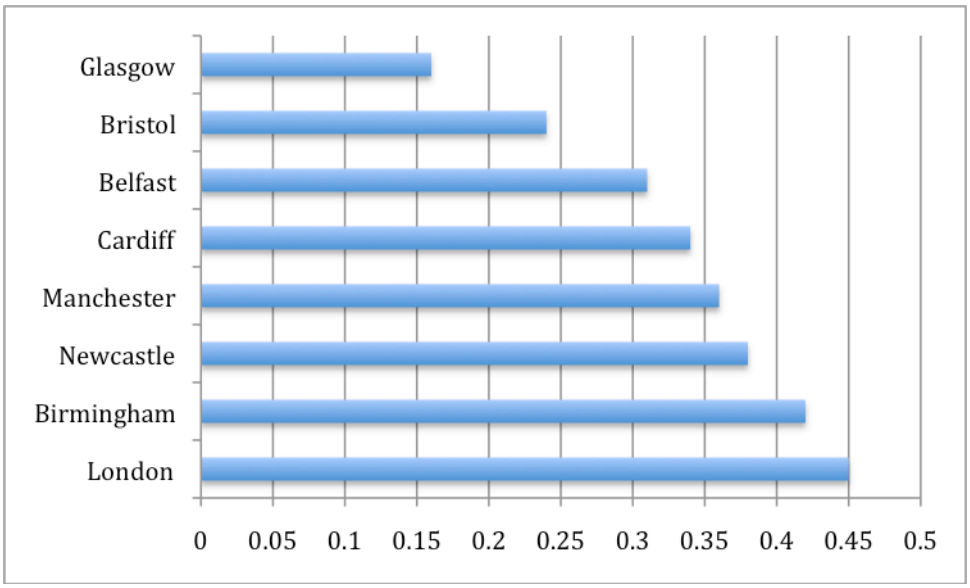
Application value: Correct response. *Factor groups are significant at $p<.05$.
2361 tokens.

Factor Group	Factor	Log odds	% of correct responses	Tokens	Centred weight
*Region of sign	London	0.531	44.7	360	0.63
	Birmingham	0.403	41.7	72	0.599
	Newcastle	0.255	38.4	216	0.563
	Manchester	0.216	36.5	255	0.554
	Cardiff	0.075	34.2	360	0.519
	Belfast	-0.068	30.9	324	0.483
	Bristol	-0.417	24.3	432	0.397
	Glasgow	-0.996	15.8	342	0.27
*Language background	Deaf	0.186	36.6	789	0.546
	Hearing	-0.186	29.3	1572	0.454
Mobility	High	0.202	34.0	1575	0.529
	Low	-0.202	29.8	786	0.471
Gender	Female	0.1	32.5	1275	0.525
	Male	-0.1	30.8	1086	0.475
School location	Local	0.115	31.2	1575	0.529
	Non-local	-0.115	32.8	786	0.471
Social class	Middle	0.066	34.5	885	0.516
	Working	-0.066	30.1	1476	0.484
Age (+1)	(continuous)	0.005			
Region	Belfast	0.084	32.8	576	0.521
	Newcastle	0.062	29.9	612	0.515
	Manchester	0.021	33.2	693	0.505
	Glasgow	-0.168	30.6	480	0.458

Degrees of freedom = 18, Mean = 0.317, Intercept = -0.912, Deviance = 2816.964. Random effects (participant) standard deviation = 0.237.

After removing the six variants, London variants appear to be the easiest variants to recognise other than the signer's own regional variants. An independent-samples t-test was performed (using a Bonferonni correction of p=0.007) to see if the differences across regions were significant.

The results show that the difference in mean accuracy scores between London (M = 0.45, S.D. = 0.50) and Birmingham (t(430)=0.476, p=0.635), Birmingham (M = 0.42, S.D. = 0.50) and Newcastle (t(286)=0.486, p=0.627), Newcastle (M = 0.38, S.D. = 0.49) and Manchester (t(469)=0.436, p=0.663), Manchester (M = 0.36, S.D. = 0.48) and Cardiff (t(613)=.589, p=0.556), Cardiff (M = 0.34, S.D. = 0.48) and Belfast (t(682)=0.919, p=0.358) and Belfast (M = 0.31, S.D. = 0.46) and Bristol (t(754)=2.010, p=0.045) were not found to be significant. Finally, difference in mean accuracy scores between the Bristol (M = 0.24, S.D. = 0.43) and Glasgow (M = 0.16, S.D. = 0.37) was significant (t(772)=2.925, p=0.004). This suggests that colour signs associated with London are most easily understood by participants; however, there was no significant difference between London, Birmingham, Newcastle, Manchester, Cardiff, Belfast and Bristol. Participants performed significantly worse at comprehending Glasgow colour signs compared to any other region (see Graph 4).



Graph 4: The mean scores for the sign variants by regional origin

3.10 Discussion

This study investigated whether there is evidence of lexical accommodation over the course of a single conversational interaction between a confederate and a signer. The data shows examples of lexical accommodation, however, the number of instances of lexical accommodation is small. On average, each participant produced tokens that were considered to be regionally bound and differed between conversational partners and so opportunities for lexical accommodation were numerous. However, it was found that participants accommodated to their partner's regional sign in only 14% of cases (i.e., 374 tokens). Not every participant accommodated to the same degree in this study with four signers not accommodating at all and others accommodating more (i.e., 18%). There are a number of ways to interpret this finding.

Drawing on the two models of accommodation, the 'change-by-accommodation' model claims that accommodation is an automatic process that results from the direct link between perceptive and productive monitoring leading to the alignment of interlocutors' utterances between interlocutors. That is, when a listener perceives the utterance of a

speaker, the auditory message is retained and this directly influences their production. However, in sign language, perception and production systems are not linked in the same way. Specifically, sign perception is visual and monitoring during sign production is likely based on both visual and motor feedback (Emmorey, Bosworth, & Kraljic, 2009). Furthermore, even visual feedback from signs being produced is very different from signs being perceived both in terms of visibility (it is hard to see one's own hands while one signs) and in terms of perspective (visual feedback of sign production is of the back of the hand, while perception is mostly of the front of the hand). The lack of accommodation found in this study may therefore be attributed to the distinct perceptive and productive monitoring in BSL.

Given the disparity in sign languages between perception and production, the presence of accommodation would have rejected the automatic alignment theory. However as accommodation was minimal, it is not clear whether accommodation is an automatic process or one governed by social factors. To fully investigate whether accommodation is an automatic process, cross-modality research should be exploited at a fine-grained level (e.g., phonological level) without the effects of conscious socio-psychological factors that may be present at a lexical level.

The 'identity-projection' model views accommodation as a social process in which interlocutors reduce or increase the differences between them and their interlocutors. From the Communicative Accommodation Theory (CAT) perspective, the lack of accommodative behaviour found in BSL suggests that signers do not adapt their regional variety to reduce the dissimilarities between them and their conversational partner and, in fact, in some cases they increase the dissimilarities between them. A lack of

accommodation may be viewed as either an example of divergence by maintaining features of their own variety or an example of no change indicating a lack of desire to either reduce or increase similarities. In the first instance, divergent behaviour may reflect the fact that BSL users are known to show pride in their use of regional varieties. This was mentioned in Study 1 and is supported by the recent documentation of regional varieties in BSL (e.g., Elton & Squelch, 2008).

In the second instance, no change may indicate a lack of necessity for signers to maintain positive social identities. The close-knit nature of the deaf community with its shared 'deaf' identity, language and history may serve as an inhibitory factor for convergent or divergent behaviour. One example is that there is minimal evidence of class distinctions in deaf users of BSL as shown in the results of Study 1. In Giles' (1973) example where a Bristol accented speaker converged towards an RP accented speaker, this was not only seen as an attempt at reducing dissimilarities but it also demonstrated that the direction of the change is dependent on the status of the variety, with speakers tending to converge towards a dialect of a higher status or prestige (Auer & Hinskens, 2005). It is often assumed that spoken languages such as English derive from a single uniform language and that regional dialects are a deviation from the source or 'standard' language. As a result, regional dialects are viewed as non-standard varieties (Francis, 1983). The fact that regional varieties in BSL have developed as separate 'school-lects' as described in Chapter 1, section 1.2.1.1, may be one reason why no single regional variety has emerged as having clearly higher status or prestige than others. As a result, the social status of a signer's regional variety does not appear to be important when interacting with a signer from a different region.

One might expect that accommodation would arise as a matter of communicative efficiency. In the interview part of this study when participants were asked why they did not accommodate during the Diapix task, a frequent response was that their interlocutor appeared to understand them without difficulty. Ease of communication here may inhibit the necessity for convergence. One reason for the ease of communication that will be discussed in more depth in the next section is the use of mouthing to disambiguate the meanings of regional signs during the conversational task. Given that dialects are mutually intelligible in English, communicative efficiency as a motive for convergence in CAT (Giles et al., 1973) should not be the driving force for accommodation in spoken languages, except between native and non-native speakers (e.g., Allwood & Ahlsén, 1986) and in adverse listening conditions (e.g., Hazan & Baker, 2011). Results from the comprehension task in this current study should shed light on whether accommodation serves as a means of improving communicative efficiency in BSL.

3.10.1 General observations: Ease of communication

A number of observations were made during the coding process of this study. Most participants only gave one or two variants for each concept (see Appendix G). Considering the variation present in BSL, this suggests that signers have a limited range of other regional variants in their mental lexicon. The concepts with the most variants were mainly number signs: *six*, *nine*, *ten* and *sixteen*. Of particular importance is the evident ease with which participants from different regional backgrounds engaged in conversation, supporting claims that signers currently have no problems understanding regional varieties in conversation (Elton, 2010; Woll et al., 1991). On the rare occasion that a miscommunication occurred, participants in most cases clarified the meaning of the

confederate's regional sign using a number of communicational strategies (e.g., mouthing, fingerspelling, switching sign variants) and then often continued to use their own variant throughout the conversation.

Several strategies were used for clarification. Number signs were sometimes produced innovatively to reflect how they were displayed in the picture scene. For example, some signers traced the numeral in the air to represent how it was displayed on the house or door. Mouthing of the colour signs, in particular, was often overemphasised. In the case where the participant and confederate produced homonyms for the signs *four* and *nine*, mouthing or orientation of the hand (i.e., *nine* produced with fingers pointing to the side) seemed to be the main features exploited to disambiguate meaning. There were also many instances in which the manual sign was dropped and only mouthing was used to represent the meaning of the colour or number. Contrastingly, in the lexical comprehension task, all regional variants were presented without mouthing. Comparing the observations of the conversation task and the results of the lexical comprehension task offers an insight into signers' degree of reliance on English mouthing in disambiguating the meanings of signs in conversation. This is discussed further in section 3.10.3.

3.10.2 Variation according to social and linguistic factors

Many studies described in section 3.3 have shown that the demographics of the interlocutor affect the speaker's speech patterns. This study considered whether accommodative behaviour in BSL was also socially constructed. The results revealed that a participant's region and age were predictors of their degree of accommodation. Signers living in Glasgow and Manchester exhibited the most accommodation compared to signers living in Belfast and Newcastle. The degree of accommodative behaviour decreased with age with

younger signers showing a greater degree of accommodation than older signers. This finding is consistent with the 'identity-projection model' (Coupland, 1984) and 'social identity theory' (e.g., Tajfel & Turner, 1986; Turner & Brown, 1978) outlined in sections 3.1 and 3.2.2. Based on social identity theory, younger people may accommodate more than older people as a means of fitting in with their in-group. This is also supported by findings in spoken language research which found that younger speakers accommodate more than older speakers (McCann & Giles, 2007).

All participants were paired with the same confederate and therefore the social variables for the confederate remained constant. However, by looking at the data from the confederate, it was possible to determine whether the confederate's signing varied depending on the social affiliations of the participants. The confederate did not accommodate equally to each participant, in some conversations not accommodating at all and in others accommodating more. The findings indicate that the confederate's degree of accommodation was subject to the regional background of the participant and the confederate's reported familiarity with them. The confederate showed the least amount of accommodation with participants from Manchester and the most amount of accommodation with participants from Glasgow. The confederate's degree of accommodation positively correlated with the region's distance from the confederate's hometown (i.e., Bristol): Manchester (141miles/226km) is closest to Bristol followed by Newcastle (247 miles/397km), Belfast (258miles/415km) and finally Glasgow (312miles/503km). This suggests that the confederate's degree of accommodative behaviour varied depending on the projected identities of speaker's interlocutors. It suggests that the confederate modified her degree of accommodation based on the assumption that regional varieties furthest away

from her hometown would be increasingly different and more difficult to comprehend. Or that the regional variety was more difficult to understand the further one travelled supporting Trudgill's (1983b) finding that degree of linguistic difference is important for comprehension.

The second most significant factor to predict the confederate's degree of accommodation was the familiarity rating of the participant by the confederate. It was found that as familiarity increased, the degree of accommodation decreased. This follows the finding that language users who are highly familiar with one other do not need to change their accent to facilitate communication (Alshangiti & Evans, 2011). Additionally, research has shown that speakers exhibit improved comprehension when interacting with someone familiar (Labov & Ash, 1997; Nyaard, Sommers, & Pisoni, 1994). This is the first study to find a familiarity effect in sign languages. It is important to note that this effect was found at a different linguistic level (i.e., lexical) to those researched in the spoken language studies (i.e., phonetic). Both findings highlight the relationship between accommodation and comprehension by showing that those factors that hinder comprehension result in increased accommodation.

3.10.3 Lexical comprehension task

The aim of this task was to determine which regional varieties were easiest to understand and which groups of signers perform best at lexical comprehension (e.g., younger signers, females, etc.). Despite the apparent ease of communication during the conversational task, feedback from the lexical comprehension task indicated that participants found identification of the meanings of regional signs very difficult without mouthing or the

opportunity for clarification. This was reflected in the results with the average participant correctly guessing 38% (i.e., 1029 tokens) of the colour sign meanings.

3.10.4 Variation according to social and linguistic factors

Two factors were found to influence participants' performance on the comprehension task: the region associated with the sign and the signer's language background. As expected, participants performed best at identifying the meanings of signs associated with their own region. From a methodological point of view, this confirms that the signs selected as traditional for each region in Study 1 were valid and informs us that signers are passively aware of (or even actively use) the traditional signs for their region, even if they may be in decline more generally. Participants with deaf parents performed significantly better than those with hearing parents in the lexical comprehension task, suggesting that native signers are passively more aware of other regional varieties in BSL than non-native signers.

3.10.5 Regional comprehension differences

Comprehension of signs was in the following order with highest comprehension first: Birmingham> London> Newcastle/Manchester/Cardiff/Belfast> Bristol/Glasgow. That is, comprehension of Birmingham and London signs appear to be easiest. In spoken languages, the most intelligible dialect is often also the standard (Clopper & Bradlow, 2008). This may be because speakers are socially motivated to understand the standard or that the standard is also the most prestigious dialect (Casad, 1974). In BSL, there is no evidence to suggest that any single regional variety is considered to be more prestigious than any other. Additionally, some varieties may be more intelligible because speakers have frequent exposure to them via the media or widespread geographical use.

In the current study, each sign variant was correlated with the participant's accuracy score to investigate which sign variants were easiest to understand. Some of the easiest variants to understand incorporated elements of fingerspelling suggesting that fingerspelling may assist in comprehension. The findings resemble Woll et al.'s (1991) study in which region was found to be an important predictor of lexical comprehension and Glasgow signs were found to be the most difficult to understand. Interestingly, in the present study, Bristol colour signs were the most difficult variants to understand despite younger signers in Study 1 using the numbering system associated with Bristol. There was no age effect found in the current study, despite Woll et al.'s (1991) study indicating that older signers performed better at identifying the meanings of BSL regional signs.

3.11 Limitations

The sample of participants for Study 2 is small and rather heterogeneous. Consequently, the results should be generalised with caution. The Diapix task, whilst serving as a reasonable means of eliciting a considerable number of regional varieties, could be improved. In the original design it was expected that signers would produce the target colour sign when describing a number of items. However, in some instances the intended target signs were not always elicited. For example, in some cases signers described hair colour as 'blond' as opposed to the target colour sign 'yellow'. Other strategies were used which avoided overtly stating the target sign, for example signers would respond by signing 'I have a number on my picture' and not explicitly stating the actual number. Finally, in some conversations the signer was very passive in their participation and did not confirm the identified difference overtly. In these instances the confederate would mention the target item and the participant would notice and circle the difference without confirmation. In

future, more explicit instructions could help prevent these problems either with the researcher providing more detailed instructions for the task (e.g., participants have to explicitly state the differences as they find them) or having the confederate encourage the participant to take a more active role. For the purposes of the current study the researcher did not direct the confederate in their linguistic behaviour or how to interact with the participant.

This methodology was based on previous studies aiming to elicit accommodation (e.g., Evans & Alshangiti, 2011; Pardo et al., 2010). However, a longer conversational interaction (e.g., 45mins; Pardo et al., 2010) may have encouraged more accommodative behaviour. Nonetheless, there were plenty of opportunities for accommodation (e.g., tokens of regionally variable signs) which did not show any change from the signer's own regional variants. Given that the researcher and confederate travelled to the participants' hometowns, participants may have had an expectation that the confederate (as the 'outsider') will modify their signing to the variety of the collection site. However, the confederate only accommodated in 6% of cases and therefore this does not seem plausible. There is no evidence to suggest that any single variety is more prestigious than another in BSL, however, it would be interesting to see whether signers would accommodate more if the confederate were a London signer.

In addition, the lexical comprehension task looked at only one semantic category (i.e., colours) and therefore the results cannot be generalised to other parts of the lexicon.

Similar to the study conducted by Hannah and Murachver (1999), this current study may be limited by employing a confederate to act as a conversational partner to all of the participants. Despite the fact that pairing participants with a confederate provided some

form of consistency throughout the experiments, not all aspects of the confederate's signing were controlled, therefore, it was not possible to establish whether the confederate accommodated at another linguistic level (e.g., signing space, pace, etc.) and whether this, in turn, affected the signing of the participant.

The aim of this study was to consider the relationship between linguistic contact and lexical change in BSL. Accommodation, as investigated in this study, is only short-term and therefore it is not possible to predict persistence effects. Few studies have found evidence of the persistence of accommodatory behaviour into post-tasks (e.g., Pardo, 2006) or longitudinal evidence of long-term dialect accommodation where the individual has moved to a new dialect region (e.g., Evans & Iverson, 2007). Accommodation effects are often short-lived and therefore even if accommodation was exhibited to a greater extent in this study, the transition from observing short-term lexical accommodation over the course of a single conversational interaction to how this may effect long-term accommodation (i.e., dialect change) is too great. For this reason, this study is limited in its implications.

In summary, the present study gives evidence of lexical accommodation in BSL but it occurred in a minimal degree. Despite this, communication between signers from different regional backgrounds did not cause any difficulties. Further analyses revealed that accommodatory behaviour was correlated with a signer's region and age with signers living in Glasgow and Manchester and younger signers accommodating more than signers in Belfast and Newcastle and older signers. Accuracy on the dialect comprehension task was low with signers recognising the meanings of signs from London above any other region than their own.

Drawing on the findings from studies 1 and 2, the next chapter will discuss what these findings reveal about language change and the future of regional varieties in BSL.

4 General Discussion

The general objective of this project was to investigate sociolinguistic patterns in the BSL lexicon in order to determine how different lexical variants are distributed through the British deaf community and how the language is changing. The two research questions were: (1) What evidence is there for language variation and change in BSL? and (2) Is there any indication that regional contact and lexical accommodation are affecting lexical variation in BSL? In addition, this research aimed to investigate how the language patterning relates to other spoken and sign language findings to date.

In Study 1 (Chapter 2), a review of the literature explained that lexical variation in both spoken and sign languages is conditioned by a number of social factors with some factors being exclusive to the visual modality (e.g., language background). The way language is patterned with social variables, such as age-related variation, can inform us about language changes taking place. The following questions formed the basis of Study 1: (1) How does lexical variation in BSL correlate with social and linguistic factors? (2) What does this tell us about language change processes taking place in BSL?

The findings indicated that there has been a reduction in traditional regional signs, suggesting that lexical levelling may be taking place in the BSL lexicon. This led to the more directed approach towards Study 2 looking at the interaction between regional contact and lexical change. Based on the principle that speakers modify their linguistic behaviour when interacting with a speaker from a different regional background, increased linguistic contact over a prolonged period of time is expected to lead to lexical change. The objective of Study 2 was to explore the effects of regional contact on lexical change by investigating experimentally whether signers engaged in lexical accommodation over the course of a

single conversational interaction and whether this accommodative behaviour was socially conditioned. Furthermore, Study 2 considers to what degree signers comprehend other regional varieties in BSL. The research questions in Study 2 were: (1) Is there evidence of lexical accommodation over the course of a single conversational interaction? (2) Does lexical accommodation in BSL correlate with social and linguistic factors? (3) To what degree do signers understand regional varieties? (4) How does regional comprehension correlate with social and linguistic factors?

Sections 4.1 and 4.2 summarise the findings of studies one and two of this project respectively and their implications with regard to the overall research questions. Section 4.3 will discuss the overall findings of this project and its possible implications. Sections 4.4, 4.5 and 4.5.2 discuss the possible interpretations of these findings. Section 4.5.3 highlights the importance of native signers and schools in BSL transmission. Finally, Section 4.6 explores what this means for the future of BSL regional variation.

4.1 Study 1: Lexical Variation and Change in the BSL Corpus Project data

Chapter 2 summarised the different factors that have been shown to predict variation in spoken and sign languages to date. Based on these previous findings, Study 1 investigated the correlation between these social factors and the use of traditional signs in BSL and considered whether there was evidence for lexical levelling.

To address the research questions for Study 1 first, the results show that lexical variation in BSL is socially and linguistically conditioned. The results indicate that the use of traditional signs in BSL is conditioned by four factors: age, school location, language background and the semantic category of the sign. Younger signers were found to use fewer regional signs than older signers. Signers who attended a local school favoured the

use of traditional regional variants compared to signers who attended a school outside the region. Signers with deaf parents favoured the use of traditional regional signs. Finally, signs for countries are undergoing a faster rate of change compared to signs for numbers and signs for colours.

To answer the second research question, a number of language change processes appear to be taking place in BSL including evidence for lexical levelling, lexical borrowings and a phonological process known as weak drop. Drawing on the apparent time hypothesis, it was proposed that this age-related variation in signs for colours and numbers is an indication that traditional regional signs are in decline. In the country sign data, there were indications that signers have changed their lexical signs throughout their lifetime. Further analyses of country sign data revealed that younger signers were either adopting the use of some newer variants or borrowing the sign used in the sign language of the corresponding country.

4.2 Study 2: Linguistic Contact and Lexical Accommodation in BSL

Chapter 3 investigated whether there is evidence of lexical accommodation in BSL. By engaging pairs of signers with contrasting regional backgrounds in conversation, the conversational task created the opportunity for lexical accommodation by eliciting a considerable number of regionally bound signs. Lexical accommodation was found; however, examples of accommodation were minimal. These results were explained by (1) the distinctive perceptive and productive monitoring in BSL, (2) the lack of desire to accommodate because of the absence of hierarchical status of BSL regional varieties, or (3) the ease of communication.

With reference to the research questions formulated for Study 2 first, lexical accommodation was exhibited over the course of a single conversational interaction, although examples of accommodation were minimal. Secondly, lexical accommodation was found to be socially conditioned. Signers living in Glasgow and Manchester accommodated more than signers living in Belfast and Newcastle. It was also found that younger signers accommodated more than older signers. Thirdly, participants appeared to have no difficulties understanding one another in the conversational task, despite conflicting evidence as to the degree of comprehension of BSL regional varieties. However, accuracy scores in a lexical comprehension task, in which they were shown regional colour signs and asked to identify their meaning from a closed set of options, were low. Fourthly, regional origin of the sign was a significant predictor of participants' accuracy in the task. In addition, participants with deaf parents performed better on the lexical comprehension task than participants with hearing parents. Participants performed best at identifying signs from their own region followed by London and Birmingham colour signs. The overall findings echo the results of other sign language variation studies, which showed the importance of language background and schooling on lexical choice.

4.3 Overall findings

Drawing on the findings of this project, these data show that lexical variation in BSL is extensive in the semantic categories under investigation (i.e., colours, countries, numbers, UK place names), supporting previous studies (e.g., Skinner, 2007; Woll, Allsop, & Sutton-Spence, 1991). Without mouthing to disambiguate the meanings of these variants, comprehension is relatively low. However, this does not appear to impede communication in face-to-face interactions, similar to findings in spoken languages where some variants

are difficult to understand without context (Trudgill, 1983b). The findings of this study may explain why claims in previous research regarding comprehension have appeared to be contradictory. This seems to relate to the fact that signers are able to communicate effectively in face-to-face interactions, using strategies to disambiguate the meanings of regional signs; however, when tested for lexical comprehension with limited context and no mouthing, comprehension appears to be low. In this study, most signers demonstrated a passive awareness of more than one regional variety as shown in the lexical elicitation task, which indicates that they know more than the signs for their own region but also suggests that their knowledge of other regional signs is passive, rather than active. The significance of school location and language background suggest that schools and native signers are vital in the transmission of regional varieties. The former is discussed in sections 4.4 and 4.5 and the latter is discussed in section 4.5.3.

This section considers the research questions proposed for the overall project. The first research question was: What evidence is there for language variation and change in BSL? A number of changes appear to be affecting the BSL lexicon. The rate of change appears to be subject to the semantic category of the sign with signs for countries changing at a faster rate than signs for numbers or colours. The results demonstrate that signs for countries have undergone dramatic change. The reasons for this change remain unstudied. However, there are a number of possible influences suggested in this study including increased contact nationally and internationally, increased exposure to variants in the media, changes in technology and the way deaf people communicate and the influence of political correctness. There is some evidence that these changes have led to increased

lexical borrowings into BSL from the corresponding country's sign language and other sign languages (e.g., ASL).

Age-related change was found in the analyses of all semantic categories. This could be interpreted as evidence of a language change taking place. Many signers in the BSL Corpus Project explicitly stated that they had changed their country sign variant over their lifetime. Therefore, this seems to reflect the adoption of new lexical items to replace traditional variants, rather than evidence of age-grading or diachronic change. With signs for numbers and colours, the data suggests that signers have maintained their lexical variant acquired in school. The age-related change in signs for countries appears to follow a different process than the age-related change in signs for numbers and colours is evidence of language change.

The second research question was: Is there any indication that regional contact and lexical accommodation are affecting lexical variation in BSL? Study 2 investigated whether there was evidence of short-term lexical accommodation over the course of a single conversational interaction. The results showed minimal evidence of lexical accommodation. Drawing on the findings from both studies, this suggests that lexical levelling in BSL cannot be explained by contact alone. This would indicate that the 'change-by-accommodation' or 'contact-induced' model does not sufficiently explain he changes found in BSL. Another possibility is that age-related variation could be interpreted as differences in mobility patterns between older and younger signers with younger signers being more mobile and therefore interacting more with signers from different regional backgrounds. Considering mobility was included as a variable in this study and was not found to be significant, it is unlikely that mobility is a contributing factor in lexical

accommodation. The differences might be the result of changes in language transmission as a result of the closure of schools for the deaf. This is discussed further in the next section.

4.4 Acquisition differences in deaf education

One explanation for levelling could be as a function of the different patterns of lexical acquisition. As discussed, the main source of BSL transmission is through peer interaction in schools (Quinn, 2010). According to Labov (2007), transmission is the main process of linguistic change and therefore any disruption in BSL transmission as a result of schooling will have considerable effects on BSL variation and change. Some signers attended a school for deaf children (95% older, 89% middle-aged, 67% younger signers in the BSL Corpus Project) whereas some attended mainstream schools, exposing them to different lexical variants. It can be speculated that older signers will have been exposed to the traditional variants, as they will have attended deaf schools where these variants developed. In contrast, younger signers who are more likely to attend mainstream schools will be exposed to the signing variants used by language service professionals (LSPs) who in most cases are hearing interpreters or communication support workers. What these variants are and whether the lexical input is more consistent for younger or older signers is unknown. Based on Ladd's prediction (2003) that around 95% of deaf children attend mainstream schools, the impact of schooling on lexical change in the BSL Corpus Project data is likely to be an underestimation of what may be happening in the community. The fact that older and younger signers have been exposed to different lexical input may be a better explanation for the age-related lexical differences found in BSL.

Considering the importance of schooling, it is worth looking at the distinction between accommodation and acquisition. In Chambers' (1992) developmental study, he

defined accommodation as being a temporary dialect change varying to reflect the interlocutors present. Acquisition was described as the adoption of dialectal features, which becomes a permanent part of the speaker's repertoire. Chambers (1992) set apart the two mechanisms in terms of their permanency rather than whether dialect change results from a change in dialect exposure in his study. In the present study levelling may be the result of differences in lexical acquisition. In Chambers' (1992) study the participants under investigation relocated and acquired new lexical items associated with the new area as a means of fitting into the community. The educational system in the UK has undergone considerable changes in that deaf children are now likely to be exposed to different lexical items than deaf children fifty years ago. The picture is complicated by the fact that the communication methods used in deaf education systems are not standardised and no studies have investigated which sign language varieties are used in the classroom. Deaf children rely on whatever sign language input they are exposed to in a range of settings including the school environment, deaf clubs and signing with friends and family. The closure of deaf schools could be a contributing factor in BSL change; however, it is likely that a combination of factors is playing a part in the reduction of regional signs. Lexical differences may be influenced not only by lexical input changes in education but also increases in mobility in the deaf community, increased exposure to lexical variants on television and the Internet and increased interaction with other sign languages. Because of this, it is only possible to speculate about the underlying causes of this language change.

Some of these motivations appear to be specific to the demographics of the deaf community with the changes found in this study not following the same patterns as spoken languages. In spoken languages, levelling is predominantly associated with speaker

accommodation and in some cases the influence of extra-linguistic factors. However, BSL regional varieties have developed in a different way compared to spoken language regional varieties. The next section will discuss how this may account for the small number of accommodatory examples found in BSL.

4.5 Hierarchy of spoken English and BSL regional varieties

In spoken languages, speakers may adapt their regional accent (i.e., reduce or increase features of their regional dialect) to indicate a certain aspect (i.e., regional origin) of their own identity to their interlocutor or to reduce the differences between themselves and their interlocutor. These differences in regional dialect between a speaker and an interlocutor are often hierarchical. That is, to lessen the differences between one speaker and their interlocutor, it often involves adapting their regional dialect by raising or lowering its status on a vertical scale to match that of their interlocutor. There is evidence in spoken English studies of 'upwards' convergence from a regional or social dialect towards a standard. For example, Giles (1973) found that the Bristolian speaker adapted their speech towards the RP-accented speaker. However, the RP-accented speaker did not show any adaptation towards the Bristolian. This accommodative behaviour towards higher status dialects has been exhibited in other studies (e.g., Turner & West, 2010). Convergence can also be 'downwards', for example, speakers has been observed to lessen features of elite speech when talking with other speakers of a lower class (Sellars, 1997).

The differences in status between regional varieties in spoken English have developed for a number of reasons. Because spoken English dialects are thought to have originated from one uniform source which dispersed into several regional varieties through language mixing or evolutionary processes (Hiddinga & Crasborn, 2011), divergence from

the original source is often assumed to be non-standard by default (Francis, 1983). For example, in the working class dialect of Reading, use of 'ain't' to substitute the standard negative contracted verbs 'am not', 'aren't', 'haven't', 'hasn't' and 'isn't' is viewed as a non-standard form rather than dialectal (Cheshire, 1981).

BSL regional varieties, however, have developed in a very different manner. For BSL regional varieties, there is no evidence that there was once a single uniform variety of BSL. As discussed in Chapter 1 section 1.2.1.1, BSL varieties developed when large deaf communities were brought together for educational purposes. Because of this, BSL varieties developed separately in school-based communities and therefore no single regional variety was assigned either standard or non-standard status. As a result, BSL varieties have developed without a standard variety and with no obvious hierarchical status among the varieties identified thus far.

The 'standard' variety in spoken languages often follows the written form of the language. Again, this is not possible for BSL as there is no standard written form for BSL. The absence of a standard BSL variety means that BSL regional varieties may not have attracted negative connotations in the same way as in spoken languages. Some English dialects have acquired negative associations as non-standard variants, in addition to the negative connotations associated with the region and people. This has led to a growing number of studies investigating dialect perception and categorisation in spoken languages, which have yet to be replicated for sign languages. Dialect perception studies show that speakers make judgements about different regional varieties in spoken languages based on aspects of 'aesthetics', 'communication', 'solidarity' and 'status' (Carranza & Ryan, 1975; Giles, 1970; Hiraga, 2005). It is debatable whether any sign language varieties have gained

status or prestige like English dialects and whether this is perceived by other members of the deaf community. This present study may be the first to suggest that signers show a preference towards any regional variants more than another. In this study, whether preference towards London and/or Bristol varieties is an indication of prestige is subject to debate as other factors may be at work (e.g., ease of articulation, percepton).

One study that has found a link between BSL varieties and status was conducted by Deuchar (1978). She found evidence of diglossia in BSL with a 'high' form closely resembling the structure of English and used predominantly in formal situations (e.g., church, BSL classes) and a 'low' form used predominantly in informal situations (e.g., pubs, deaf club). The 'high' form was reported to have a higher status than the 'low' form because of its association with the dominant surrounding spoken language. Other researchers have suggested that prestigious forms of BSL may develop with signers with deaf parents serving as the linguistic elite (Sutton-Spence & Woll, 1999). There have been no reports, however, stating the relationship between regional varieties in BSL and status, thus remaining an empirical question.

Speakers not only adapt their speech in accordance with the status of their interlocutor's dialect, they also modify their speech depending on the perceived identities of the individual with whom they are interacting, despite the fact that speech patterns and actual group membership may not correlate. This presupposes that a hierarchical structured society exists. Within a minority group, such as the British deaf community, these hierarchies or social distinctions may not be quite as prominent as they are in the surrounding hearing community (Sutton-Spence & Woll, 1999). For example, although social class was found to be important in other sign language research (e.g., Lucas et al.,

2001), it appears to not be as pervasive in this current study.

The significance of age, gender and ethnicity in accommodation studies can also be explained by social status. Some social factors associated with accommodative behaviour, other than socioeconomic status, can be interpreted as differences in status between speakers. Research has shown that younger speakers accommodate more than older speakers (McCann & Giles, 2007), men speak more than females (Argyle, Lalljee, & Cook, 1968; Strodtbeck, James, & Hawkins, 1957; Strodtbeck & Mann, 1956) and lower status cultural groups (e.g., African American) accommodate towards higher cultural groups (e.g., European American) (Rickford & McNair-Knox, 1994). This is thought to be because older people hold more authority than younger people and therefore it is respectful to accommodate to their behaviour. Men hold more power over women in society and majority cultural groups (e.g., whites) dominate over minority cultural groups (e.g., blacks). This idea is encompassed by social dominance theory, which states that humans are organised into hierarchical social groups displaying differing degrees of power and authority over one another (Sidanius & Pratto, 1999). The social dominance phenomenon has been observed in spoken language research. In this current study there were no gender or social class differences found in accommodative behaviour, suggesting that the social dominance theory might not apply in BSL.

The very fact that accommodation is found to be unidirectional in these aforementioned spoken language investigations suggests that the social status or prestige of the regional variety is important for the presence of accommodation in spoken languages. Subsequently, the same might be expected in BSL. The fact that younger signers were favouring the variety associated with London might indicate that this is or may be emerging

as the prestigious regional variety in BSL. If this is the case, signers from outside of London might be expected to accommodate towards the London variety in a hierarchical fashion. At present, it is not clear whether the London variety is emerging as a prestigious form or whether it is favoured for reasons of articulatory or perceptual ease or whether it is a combination of the two. A full investigation looking at how signers perceive regional varieties in BSL is necessary to understand whether some varieties are considered to be more prestigious than others in the same way as in spoken languages.

4.5.1 School-lects or regional varieties?

Anecdotal claims suggest that many signers can recognise other signers' schooling from the way that they sign including whether they attended a mainstream or residential school, an oral or signing school and in some cases the specific school itself (e.g., Mary Hare Grammar School). As a result, a commonly asked question when two deaf people meet is: "what school did you go to?" It may be that the deaf community does not perceive BSL regional varieties in the same way as in spoken languages.

As described in Chapter 2, a study by Eichmann and Rosenstock (2012) looked at how regional differences were perceived in German Sign Language (Deutsche Gebärdensprache, DGS). They found that deaf signers generally marked the existence of DGS regional varieties on a map based on the sites of schools for deaf children, indicating that there is a strong link between DGS varieties and schools in how they are perceived by signers. Productive data also revealed a link between variant and school, although, adult signers claimed that the relationship between variant and school was less obvious when conversing with child signers compared to adult signers, suggesting that the link may be reducing as a result of changes in deaf education in Germany. While it is clear that schools

and variation are interlinked, what is less well known is whether signers perceive regional differences as school-lects or as regional variation.

The deaf community may view these separate varieties more appropriately as school-lects, rather than regional varieties. If this is the case, signers may not project their lexical differences as a means of showing their regional affiliations. However, it is possible that for the more well-known schools (e.g., Mary Hare Grammar School), signers may use their differences to show their school identity.

4.5.2 Accommodation as a means to facilitate communication

The arguments put forward to explain the reduced incidences of accommodation in BSL relate to the lack of hierarchy in BSL regional varieties. Another feasible explanation could be ease of communication. One theory for the motivation of accommodation describes accommodation as a strategic process for making oneself understood (Allwood & Ahlsén, 1986). Despite the low accuracy scores on the lexical comprehension task in the current study, there appeared to be no problems understanding regional varieties in the main conversational task. Given that regional variation did not cause difficulties in the conversational task in this study, this may explain the lack of accommodation exhibited. This is reflected by some responses in the interview data. Participants were asked in the post-task interview why they did or did not accommodate. Some participants stated that they did not accommodate towards the confederate because she had no difficulties understanding them.

The picture with regard to BSL regional comprehension is complex. In the Diapix task in Study 2, participants did not appear to have difficulties understanding the confederate, despite regional differences. In addition, participants usually showed

productive competence of more than one variety. The lexical comprehension task offered an opportunity to see if comprehension was affected when mouthing was removed. The results indicate that mouthing appears to be important in comprehension in disambiguating the meaning of polysemic signs with low accuracy in the comprehension task compared to the relative ease of communication in the conversational task. This bimodal simultaneity is a unique feature in sign languages that use mouthing. In BSL, when one signer describes their car colour as 'purple' to their interlocutor, from the corpus data alone there are 22 possible signs that they may use. Although mouthing in the Diapix task was not coded for, observation of the data indicates that most 'purple' variants are accompanied by the English mouthing 'purple'. The interlocutor in this case may only have a passive understanding of a few of these variants but they may deduce the meaning of the sign variant with the aid of the mouthing.

In spoken English, if one speaker says to their interlocutor "do you want some kets?", the interlocutor who may not be familiar with the regional word 'kets' (to mean 'sweets/treats') may reduce the possible meanings of the word from the context. Other than context, there are few secondary means for determining the meaning. It is likely that this mouthing feature enables the co-existence of several variants in BSL without the necessity for accommodation for functional purposes.

4.5.3 Transmission of regional variants by native signers

Signers with deaf parents not only used a higher proportion of traditional regional signs than signers with hearing parents in the corpus data, they also performed better in the lexical comprehension task. This suggests that they have a greater understanding of regional varieties than individuals with hearing parents. Other studies have also revealed

the importance of language background for sign language comprehension and production. Native signers have been found to perform better than non-native signers on sign language comprehension tasks in ASL and BSL (Boudreault & Mayberry, 2006; Cormier, Schembri, et al., 2012; Mayberry & Witcher, 2005; Mayberry, 1993). However, these studies investigate language processing rather than comprehension of language.

Based on the finding that native signers have a wider understanding of BSL regional varieties and that they use more regional signs than non-native signers, one can speculate that native signers are vital for the maintenance of regional varieties. Recent closures of deaf schools as described in Chapter 1 have resulted in deaf children from hearing families having less of an opportunity to interact with deaf children from deaf families (i.e., native signers). Given these recent educational changes, this may have had an effect on the transmission of regional varieties in BSL.

4.6 Direction of change and the future of BSL regional variation

Following the reduction in traditional regional signs, the next question is which variants are now being favoured above those traditionally associated with a signer's region. Upon investigating the number sign variants favoured by younger signers in the BSL Corpus data, three main findings were identified.

First, in the majority of cases younger signers favoured the sign variants traditionally associated with London. Of the eight regions investigated within this dataset, the results show that younger signers are using the number sign variants that are associated predominantly with London rather than those of their own region. This was complemented by the finding in the lexical comprehension task which found that London varieties were the easiest to understand, aside from Birmingham varieties (which were suggested as being

easier to understand because some variants included aspects of fingerspelling). The Corpus Project is not an exhaustive collection of all of the numbering systems used in BSL. Therefore it can only speculate that signers are favouring this numbering system simply because it is associated with London. This is not surprising, however, given that London is a dominant economic centre and therefore British language users have increased exposure to the London varieties, in BSL and spoken English alike (Britain, 2002; Trudgill, 1983a).

Secondly, in other cases the results suggest that younger signers have a preference for the most frequently used handshape in the number sign data. Thirdly, there appears to be a preference for a side-to-side movement to differentiate numbers *thirteen* to *nineteen* from numbers *one* to *ten*. This side-to-side movement is arguably easier to produce compared to the movement in other numbering systems (e.g., flicking, flexing, twisting movements) because it uses a joint more proximal to the body compared to the hand internal movement (Mirus et al., 2001). Number signs in this study that use a flexing or flicking movement would therefore be disfavoured compared to number signs produced at the wrist (i.e., side-to-side movement). Contrary to this, some researchers claim that sign movements using proximal joints require more effort than those using distal joints (Napoli, Sanders, & Wright, 2011). However, this warrants further investigation. Some numbering systems may also be disfavoured as they are two-handed as opposed to one-handed. The numbering system in Manchester, for example, may be disfavoured as it uses two hands (e.g., Anderson, 1979; Skinner, 2007).

The overall direction of these findings seems to suggest that signers are favouring the variants with the widest currency and also variants that involve the least amount of effort to articulate. This falls in line with the traditional view that language change is part of

a simplification process (Bright, 1997).

Having discussed in detail the empirical data presented in Chapters 2 and 3, the final chapter makes some concluding remarks and suggestions for future areas for research.

5 Conclusions

The first study aimed to identify language variation and change in the BSL lexicon. Previous studies on variation in BSL were based on insufficient sample sizes, did not provide a quantitative analysis of lexical variation and/or did not have access to sufficiently detailed metadata from the signers involved (e.g., the 'See Hear' data, Woll, Allsop & Sutton-Spence, 1991). The data used for the present study came from BSL Corpus Project which aimed to collect the first large representative sample of BSL used by the British deaf community (Schembri, Fenlon, Rentelis, Reynolds, & Cormier, under review). Given the breadth and depth of this data collected, this project serves as the first systematic analysis to demonstrate that lexical variants in BSL correlate with social and linguistic factors.

The project contributes towards the sociolinguistic literature by demonstrating that lexical variants in BSL are socially patterned in the same way as lexical variation in spoken languages. At the same time, it has highlighted important modality-specific differences with particular emphasis placed on variables exclusive to sign languages such as language background and school location (cf. Lucas, Bayley, & Valli, 2001; Quinn, 2010). From a sociological perspective, these findings reflect how changes in society (e.g., increased mobility) have had an impact on language variation but that, more specifically, the broader societal changes appear to be trumped by changes specifically affecting the British deaf community. As discussed in Chapter 1, Johnston (1989) highlights four factors shared across all sign languages: language medium, autonomy, acquisition and literacy. These highlight the unique sociolinguistic situation faced by sign languages, in particular the key role played by native signers and deaf schools in the transmission of BSL regional varieties. One explanation for the decline in variation may be the closure of deaf schools, which has reduced the opportunity for

signers from hearing parents to be exposed to the signing of native signers. These educational changes may continue to be unstable before they become stable (Knoors & Marschark, 2012). For example, lexical variation appears to be increasing in German Sign Language (Deutsche Gebärdensprache, DGS) rather than decreasing as a result of educational changes (Eichmann & Rosenstock, 2012). Therefore, the future of BSL regional variation is unknown. However, whilst school closure may be one explanatory factor, it is likely that a number of recent changes affecting the British deaf community have contributed towards the change, including increased national and international contact with other deaf communities and an increased exposure to BSL regional varieties on television and the Internet.

The second study in this project aimed to investigate lexical accommodation and the effects of regional contact and how this can inform us about lexical change in BSL. Accommodation has long been of interest to sociolinguists because of its implications for dialect change (Trudgill, 1986). The findings here indicate that accommodation at a lexical level is minimal in BSL; however there could be accommodation at other levels. Given that lexical accommodation was found to be minimal, this suggests that contact between regional varieties may not be the best predictor for lexical change in BSL.

5.1 Suggestions for future research

The findings from this study have identified patterns of lexical variation and change in BSL. It is clear, however, that there is a necessity for further methodological improvements and investigations to extend our understanding of the motivations for these changes.

5.1.1 Methodological improvements

There are a number of ways in which the current studies could be improved. Only one example of lexical variation was coded from each participant in the lexical elicitation

task data in Study 1. Examples of all lexical variants produced during the task would provide a fuller account of the lexicon of each participant in the BSL Corpus Project. This data is available via the BSL Corpus Project website (www.bslcorpusproject.org/data) for researchers to investigate in future. In addition, if lexical variants were examined from a range of different settings (e.g., conversation), this would provide an opportunity to code for a range of linguistic factors (e.g., phonetic co-articulation) as well as social factors.

The overall findings of Chapter 1 showed that language change processes differ depending on the semantic category of the sign. The remainder of the lexical elicitations from the BSL Corpus Project data (i.e., for 61 concepts) could be analysed to consider lexical variation in a variety of semantic fields including food, technology and days of the week. Moreover, phonological variants of the same lexical item were not investigated as part of this investigation. This data is a rich resource for comparison to other sociolinguistic studies that considered lexical and phonological variation (e.g., Lucas et al., 2001; McKee & McKee, 2011).

The BSL Corpus Project did not, of course, provide an exhaustive collection of all lexical variants from the entire BSL lexicon or deaf community. It is crucial that researchers continue to expand the BSL Corpus by collecting data from a number of additional locations across the UK (e.g., Liverpool, Edinburgh, Southampton) and by collecting follow-up data, in a number of years' time, to provide comparable diachronic data. A follow-up study with more data would help verify the direction of change for BSL lexical variants by providing a more extensive account of the variants present in other regions. Furthermore, this would help to verify the reliability of the apparent time hypothesis in this study by confirming whether the age-related differences are evidence of age-grading, adoption of lexical innovations across all age groups or lexical levelling.

Research into dialect acquisition has shown that lexical change is faster than phonological or syntactic changes (Chambers, 1992). Whilst phonological variation has been the focus of some investigations in BSL (Fenlon, Schembri, Rentelis, & Cormier, 2013), grammatical variation continues to be an under-researched area. This warrants further investigation.

In Study 2, the Diapix task was adapted from spoken language research to elicit regional signs as part of a conversational 'spot-the-difference' task. This task provided an opportunity to observe instances of lexical accommodation despite it occurring on a small scale. To encourage more examples of lexical accommodation the task could be lengthened to resemble other studies (e.g., 45 minute task, Pardo, Jay, & Krauss, 2010). Furthermore, one might expect signers to accommodate more when they visit another region than when a person visits them in their hometown, as in the latter scenario (the one employed in this study) they may expect the visitor to converge to their regional variety. A task in which two signers from different regional backgrounds were filmed in a neutral site would complement the current findings on accommodation.

5.1.2 Investigation of possible motivations for change

The results have highlighted the importance of schools for deaf children in maintaining BSL regional varieties, following the findings in other sign language studies (Eichmann & Rosenstock, 2012; Quinn, 2010). A follow-up study could aim at determining which lexical variants children are exposed to in a range of different educational settings (e.g., mainstream vs. deaf schools). An ethnographic study to investigate the changing nature of deaf education would be the next step in understanding how changes in schooling have influenced BSL variation and change.

Other possible factors, such as the influence of television on lexical variation in BSL, need to be revisited as previous studies were undertaken nearly twenty years ago

(e.g., Woll, 1994), when television programmes including sign language were minimal. Considering that the media is expected to influence variation at a lexical level, one suggestion for future studies would be to include media as a variable in some manner (e.g., number of hours exposed to signing on television). Another suggestion would be to investigate which lexical variants are used frequently on signed programmes, for example, which variants are used for countries on the news. Given the increase in mobility in the deaf community, further studies looking at the relationship between international contact and lexical change would help to better understand the influence of International Sign, ASL and other sign languages on BSL (cf. Brennan, 1990, 1992).

5.1.3 Phonetic accommodation study

There is an on-going debate among researchers as to whether accommodation is an automatic process or one motivated by social factors (cf. Giles, Taylor, & Bourhis, 1973; Pickering & Garrod, 2004). The question of whether the primary motive for accommodation is social or automatic cannot be answered from the results of this study. A comprehensive investigation into accommodation in sign language may yield results that can tease apart whether accommodation is motivated by automatic imitative behaviours or social factors. Such studies may shed some light on the motivations behind dialect change put forward in spoken languages (e.g., Auer & Hinskens, 2005). With lexical accommodation, signers are more conscious of their lexical choices than of phonetic or syntactic ones; therefore, an investigation at a different linguistic level (i.e., phonetic variation) is warranted. Considering the fact that studies have already shown convergence in the use of signing space between deaf individuals, this would be a reasonable area for further investigation (Emmorey, Korpics, et al., 2009; Hill & McCaskill, 2010). In addition, it would be useful to include a post-task to determine

whether any short-term accommodation show signs of persistence beyond the initial experimental session.

5.1.4 Perceptual Dialectology study

A perceptual dialectology experiment looking at BSL regional variation would help to establish whether signers show an affiliation with London varieties rather than the form or structure of the numbering system that is associated with London. One suggestion for future research would be to design a perceptual dialectology study in BSL similar to the studies in spoken languages (Hiraga, 2005; Montgomery, 2011; Niedzielski & Preston, 2003; Preston, 1999) and recently in sign languages (Eichmann & Rosenstock, 2012). In this study, participants would observe a range of BSL regional varieties and be asked to judge each one for a number of attributes (e.g., aesthetics, communication, solidarity, status). No research to date has considered whether deaf people associate certain BSL varieties with any of these attributes. This would determine more definitively whether signers perceive BSL regional varieties differently and the extent to which regional signs are associated with any status or prestige.

In addition, using the BSL Corpus Project interview data may provide an initial indication about how signers perceive BSL regional differences. In the interview data of the project, participants were asked about regional variation (e.g., Do deaf people in your area use signs that are different from the signs used in other parts of the UK? If you moved to a different part of the UK, do you think it is important to use the signs in that area, or would you carry on using your own signs?). The responses should provide some insight as to whether signers recognise the lexical differences in BSL by region or by school. It would also be interesting to find out whether signers are able to categorise regional varieties into the actual regions from which the signs originate, as in spoken language dialect classification studies (e.g., Clopper & Pisoni, 2004, 2007). This may

shed some light on whether signers perceive BSL variation as regional differences or school-lects.

5.1.5 Study on BSL mouthing

This project highlighted the importance of mouthing in the comprehension of BSL regional varieties. In order to systematically investigate the extent to which mouthing facilitates comprehension, however, the lexical comprehension task could be improved by including 'mouthing' and 'no mouthing' conditions so that accuracy scores could be compared whilst isolating the mouthing variable similar to the methodology in Safar et al.'s study (in press). Mouthing in the data collected as part in the Diapix task could be analysed to consider how many signs are produced simultaneously with mouthing in conversation, in particular for the signs under investigation (i.e., colours and numbers).

5.2 Implications of this research

The findings of this project have several implications for the second language acquisition of BSL, language maintenance and sociolinguistic theory. The findings on BSL variation and change may prove useful for teachers, interpreters and learners of BSL in understanding how the language is changing and how sign variants are distributed. They also highlight to the deaf community the changing nature of the BSL lexicon and consequently may serve as a resource or means of motivation for signers to document use of their regional signs for maintenance purposes.

From a sociolinguistic point of view, by adopting the methods of a first wave study, this study has identified broad correlations between lexical variants and social factors in BSL, providing future researchers with a valuable resource for applying second and third wave sociolinguistic methodologies. A second or third wave approach to this research (e.g., an ethnographic study) would provide a more detailed account of

language use in BSL and help us to better understand the social meanings associated with BSL language variation and change.

5.3 Concluding remarks

This project is the first of its kind to have investigated the relationship between regional contact and lexical change in BSL. It uses methodologies proposed originally in spoken language studies and makes initial suggestions about the motivations for the findings. Many of the answers to the questions here have raised further questions and areas for future research. It is clear that investigating sign languages will prove to be fruitful for expanding our knowledge of sociolinguistic and accommodation theories which so far have been focused primarily on spoken languages. This project is therefore a foundation for future studies to build upon.

Appendix A: Table of lexical variants produced in the lexical elicitation task during Study 1 for 33 concepts

AMERICA (249)				
ID Gloss	AMERICA	AMERICA2	AMERICA3	AMERICA4
Example of variant				
Tokens	174	31	15	11

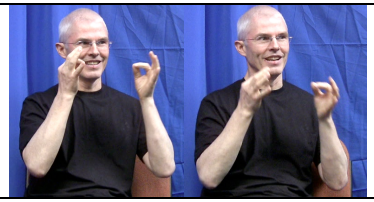
ID Gloss	AMERICA5	AMERICA6	AMERICA7	AMERICA8
Example of variant				
Tokens	6	3	3	2

ID Gloss	AMERICA9	AMERICA10	FINGERSPELLING (not a lexical variant)
Example of variant			A-M-E-R-I-C-A

BRITAIN (249)				
ID Gloss	BRITAIN	BRITAIN2	BRITAIN3	BRITAIN4
Example of variant				
Tokens	132	45	28	23

ID Gloss	BRITAIN5	BRITAIN6	BRITAIN7	BRITAIN8
Example of variant				
Tokens	10	3	2	2

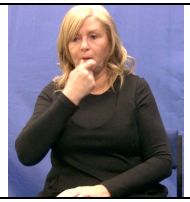
ID Gloss	BRITAIN9	BRITAIN10	FINGERSPELLING (not a lexical variant)
Example of variant			B-R-I-T-A-I-N
Tokens	2	1	1

CHINA (248)				
ID Gloss	CHINA	CHINA2	CHINA3	CHINA4
Example of variant				
Tokens	165	81	1	1

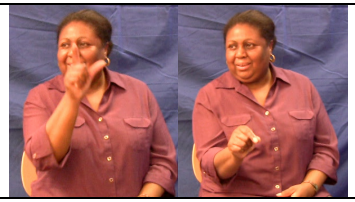
FRANCE (249)				
ID Gloss	FRANCE	FRANCE2	FRANCE3	FRANCE4
Example of variant				
Tokens	155	51	25	13

ID Gloss	FRANCE5	FRANCE6	FRANCE7	FRANCE8
Example of variant				
Tokens	2	1	1	1

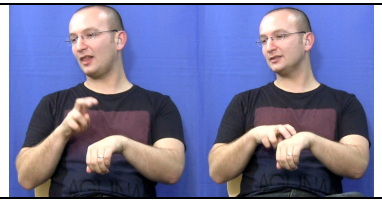
GERMANY (247)				
ID Gloss	GERMANY	GERMANY2	GERMANY3	GERMANY4
Example of variant				
Tokens	190	24	18	7

ID Gloss	GERMANY5	GERMANY6	GERMANY7	GERMANY8	GERMANY9
Example of variant					
Tokens	3	2	1	1	1

INDIA (248)				
ID Gloss	INDIA	INDIA2	INDIA3	INDIA4
Example of variant				
Tokens	147	40	26	19

ID Gloss	INDIA5	INDIA6	INDIA7	INDIA8
Example of variant				
Tokens	5	4	3	1

ID Gloss	INDIA9	INDIA10	INDIA11
Example of variant			
Tokens	1	1	1

IRELAND (248)				
ID Gloss	IRELAND	NORTHERN-IRELAND	IRELAND3	IRELAND4
Example of variant				
Tokens	170	73	3	1

ID Gloss	IRELAND5
Example of variant	
Tokens	1

ITALY (249)			
ID Gloss	ITALY	ITALY2	ITALY3
Example of variant			
Tokens	149	52	27

ID Gloss	ITALY4	ITALY5	ITALY6	ITALY7	FINGERSPELLING (not a lexical variant)
Example of variant					I-T-A-L-Y
Tokens	9	8	2	1	1

BROWN (249)				
ID Gloss	BROWN	BROWN2	BROWN3	BROWN4
Example of variant				
Tokens	69	62	46	29

ID Gloss	BROWN5	BROWN6	BROWN7	BROWN8
Example of variant				
Tokens	26	12	4	1

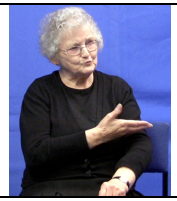
GREEN (249)				
ID Gloss	GREEN	GREEN2	GREEN3	GREEN4
Example of variant				
Tokens	79	33	30	29

ID Gloss	GREEN5	GREEN6	GREEN7	GREEN8
Example of variant				
Tokens	24	22	14	10

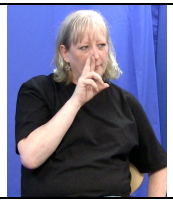
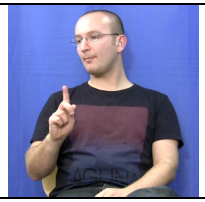
ID Gloss	GREEN9	GREEN10
Example of variant		
Tokens	7	1

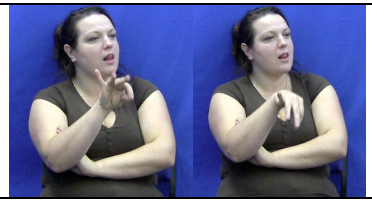
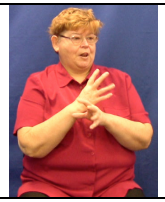
GREY (248)						
ID Gloss	GREY	GREY2	GREY3	GREY4	GREY5	GREY6
Example of variant						
Tokens	68	29	27	25	23	20

ID Gloss	GREY7	GREY8	GREY9	GREY10	GREY11
Example of variant					
Tokens	15	10	9	8	7

ID Gloss	GREY12	GREY13	GREY14	FINGERSPELLING (not a lexical variant)
Example of variant				G-R-E-Y
Tokens	1	1	1	4

PURPLE (247)						
ID Gloss	PURPLE	PURPLE2	PURPLE3	PURPLE4	PURPLE5	PURPLE6
Example of variant						
Tokens	90	33	33	28	20	15

ID Gloss	PURPLE7	PURPLE8	PURPLE9	PURPLE10	PURPLE11	PURPLE12
Example of variant						
Tokens	4	4	3	2	2	2

ID Gloss	PURPLE13	PURPLE14	PURPLE15	PURPLE16	PURPLE17
Example of variant					
Tokens	2	1	1	1	1

PURPLE (247)					
ID Gloss	PURPLE18	PURPLE19	PURPLE20	PURPLE21	PURPLE22
Example of variant					
Tokens	1	1	1	1	1

YELLOW (247)				
ID Gloss	YELLOW	YELLOW2	YELLOW3	YELLOW4
Example of variant				
Tokens	114	41	27	26

ID Gloss	YELLOW5	YELLOW6	YELLOW7	YELLOW8
Example of variant				
Tokens	19	15	3	2

ONE (249)	
ID Gloss	ONE
Example of variant	
Tokens	249

TWO (249)	
ID Gloss	TWO
Example of variant	
Tokens	249

THREE (249)			
ID Gloss	THREE	THREE2	THREE3
Example of variant			
Tokens	125	120	4

FOUR (249)		
ID Gloss	FOUR	FOUR2
Example of variant		
Tokens	189	60

FIVE (249)	
ID Gloss	FIVE
Example of variant	
Tokens	249

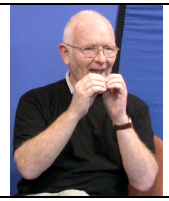
SIX (247)				
ID Gloss	SIX	SIX2	SIX3	SIX4
Example of variant				
Tokens	169	66	9	3

SEVEN (247)				
ID Gloss	SEVEN	SEVEN2	SEVEN3	SEVEN4
Example of variant				
Tokens	145	83	13	3

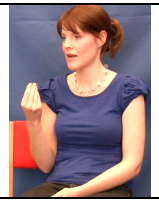
ID Gloss	SEVEN5	SEVEN6	SEVEN7
Example of variant			
Tokens	1	1	1

EIGHT (249)						
ID Gloss	EIGHT	EIGHT2	EIGHT3	EIGHT4	EIGHT5	EIGHT6
Example of variant						
Tokens	171	59	14	2	2	1

NINE (249)				
ID Gloss	NINE	NINE2	NINE3	NINE4
Example of variant				
Tokens	194	30	24	1

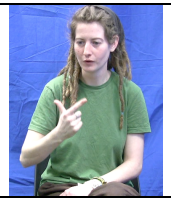
TEN (249)					
ID Gloss	TEN	TEN2	TEN3	TEN4	TEN5
Example of variant					
Tokens	58	56	61	30	22

ID Gloss	TEN6	TEN7	TEN8	TEN9
Example of variant				
Tokens	18	2	1	1

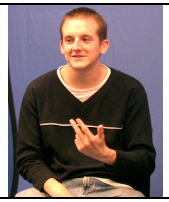
ELEVEN (247)				
ID Gloss	ELEVEN	ELEVEN2	ELEVEN3	ELEVEN4
Example of variant				
Tokens	83	61	33	30

ID Gloss	ELEVEN5	ELEVEN6	ELEVEN7
Example of variant			
Tokens	26	13	1

TWELVE (249)				
ID Gloss	TWELVE	TWELVE2	TWELVE3	TWELVE4
Example of variant				
Tokens	85	54	36	28

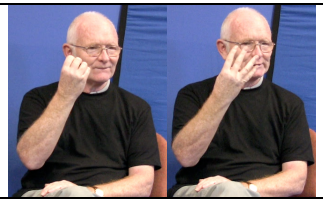
ID Gloss	TWELVE5	TWELVE6	TWELVE7	TWELVE8
Example of variant				
Tokens	20	15	6	2

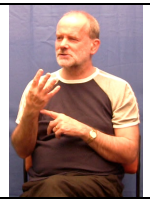
ID Gloss	TWELVE9	TWELVE10	TWELVE11
Example of variant			
Tokens	1	1	1

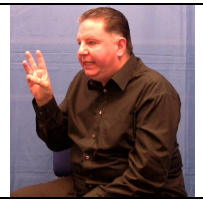
THIRTEEN (249)					
ID Gloss	THIRTEEN	THIRTEEN2	THIRTEEN3	THIRTEEN4	THIRTEEN5
Example of variant					
Tokens	63	52	34	27	27

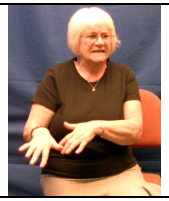
ID Gloss	THIRTEEN6	THIRTEEN7	THIRTEEN8	THIRTEEN9	THIRTEEN10
Example of variant					
Tokens	22	15	3	2	1

ID Gloss	THIRTEEN11	THIRTEEN12	THIRTEEN13
Example of variant			
Tokens	1	1	1

FOURTEEN (249)					
ID Gloss	FOURTEEN	FOURTEEN2	FOURTEEN3	FOURTEEN4	FOURTEEN5
Example of variant					
Tokens	98	45	35	29	27

ID Gloss	FOURTEEN6	FOURTEEN7	FOURTEEN8	FOURTEEN9	FOURTEEN10
Example of variant					
Tokens	7	5	1	1	1

FIFTEEN (248)				
ID Gloss	FIFTEEN	FIFTEEN2	FIFTEEN3	FIFTEEN4
Example of variant				
Tokens	107	64	44	27

ID Gloss	FIFTEEN5	FIFTEEN6	FIFTEEN7	FIFTEEN8
Example of variant				
Tokens	2	2	1	1

SIXTEEN (246)				
ID Gloss	SIXTEEN	SIXTEEN2	SIXTEEN3	SIXTEEN4
Example of variant				
Tokens	65	62	55	43

ID Gloss	SIXTEEN5	SIXTEEN6	SIXTEEN7	SIXTEEN8
Example of variant				
Tokens	16	3	1	1

SEVENTEEN (249)				
ID Gloss	SEVENTEEN	SEVENTEEN2	SEVENTEEN3	SEVENTEEN4
Example of variant				
Tokens	85	46	42	34

ID Gloss	SEVENTEEN5	SEVENTEEN6	SEVENTEEN7	SEVENTEEN8	SEVENTEEN9
Example of variant					
Tokens	20	18	2	1	1

EIGHTEEN (249)						
ID Gloss	EIGHTEEN	EIGHTEEN2	EIGHTEEN3	EIGHTEEN4	EIGHTEEN5	EIGHTEEN6
Example of variant						
Tokens	63	54	50	35	22	17

ID Gloss	EIGHTEEN7	EIGHTEEN8	EIGHTEEN9	EIGHTEEN10	EIGHTEEN11
Example of variant					
Tokens	3	2	1	1	1

NINETEEN (249)				
ID Gloss	NINETEEN	NINETEEN2	NINETEEN3	NINETEEN4
Example of variant				
Tokens	99	42	38	31

ID Gloss	NINETEEN5	NINETEEN6	NINETEEN7	NINETEEN8
Example of variant				
Tokens	18	17	3	1

TWENTY (249)				
ID Gloss	TWENTY	TWENTY2	TWENTY3	TWENTY4
Example of variant				
Tokens	114	85	30	11

ID Gloss	TWENTY5	TWENTY6	TWENTY7
Example of variant			
Tokens	5	3	1

Appendix B: Table showing the number of lexical variants per concept

Concept	Number of lexical variants
America	10
Britain	10
China	4
France	8
Germany	9
India	11
Ireland	5
Italy	7
Brown	8
Green	10
Grey	14
Purple	22
Yellow	8
One	1
Two	1
Three	3
Four	2
Five	1
Six	4
Seven	7
Eight	6
Nine	4
Ten	9
Eleven	7
Twelve	11
Thirteen	13
Fourteen	10
Fifteen	8
Sixteen	8
Seventeen	9
Eighteen	11
Nineteen	8
Twenty	7
TOTAL	**256**

Appendix C: Instructions provided for Study 2

Instructions for confederate

Please start the task by using your own signs. As the task progresses, feel free to use whichever signs you are comfortable using when interacting with your partner.

Instructions for participants

Picture-naming task

In this task, you will be shown a picture with an English translation underneath. You will be asked to produce the sign that you would use most on a daily basis for the picture. Then give other examples of signs for this picture that you know.

Spot-the difference task

You will be paired with another participant to complete this task. You will both be given a picture of a similar scene. There will be 12 differences between your picture and your partner's picture. Without looking at each other's pictures, describe your picture in detail to your partner to identify the differences. Start your description from the top left corner of your picture and continue in a clockwise direction. There will be three different picture scenes. Please take your time.

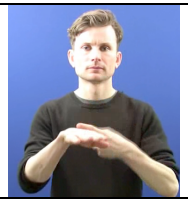
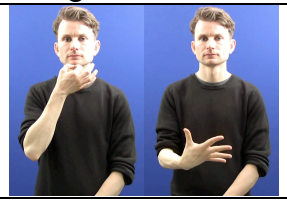
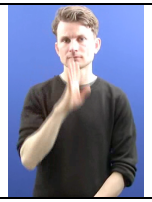
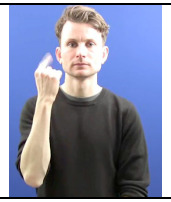
Picture-sign matching task

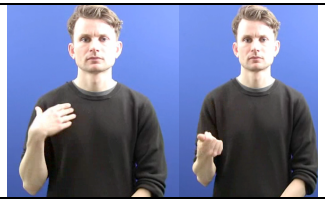
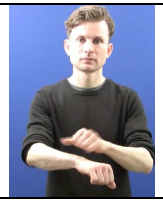
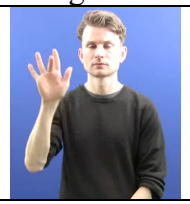
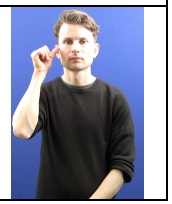
You will be shown a sign in BSL. Then you will be shown 8 pictures, one of which matches the meaning of that sign. Choose the picture that you think best matches the sign. After you have provided an answer for each sign, you will be asked to rate how confident you feel about your answer from 1 to 5. If you are confident that your answer is correct then select 1 (confident). If you feel that you only guessed the answer then select 5 (not confident). The task will start with a practice run.

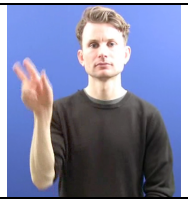
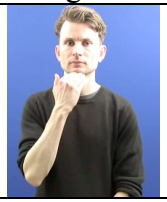
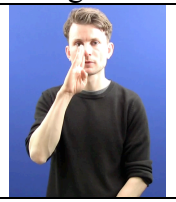
Appendix D: Interview questions for Study 2

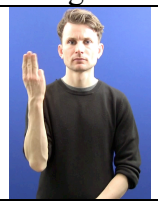
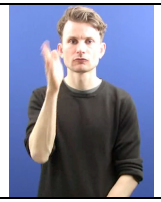
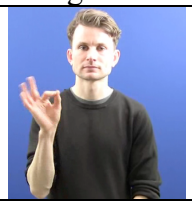
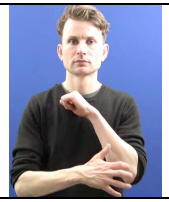
1) How did you find the 'spot-the-difference' task?
    a. Was it easy or difficult?
2) How did you find the lexical comprehension task?
    a. Was it easy or difficult?
3) How well do you know the confederate?
    a. Do you know where she is from?
4) Did you think that your signing changed to accommodate the confederate?
5) Why do you think your signing did/did not change?
6) Do you feel that you can recognise what region a signer is from by their signing?
7) Do you think other signers recognise what region you are from by your signing?
8) Do you feel you can recognise what school a signer attended from their signing?
9) Do you think other signers recognise what school you attended from your signing?
10) Are there any areas of the UK where you find the signing difficult to understand?
11) How familiar are you with signs from the southeast of England?
    a. How often do you visit?
    b. Give a familiarity rating 1-5 (1= not familiar, 5 = very familiar).

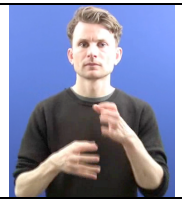
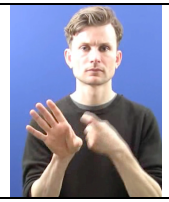
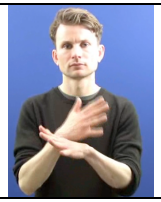
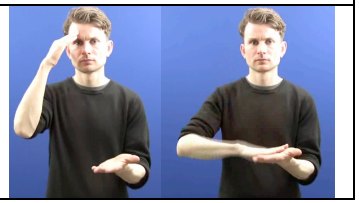
Appendix E: Table showing the lexical variants included in the lexical comprehension task in order of accuracy (from most difficult to understand to easiest to understand)

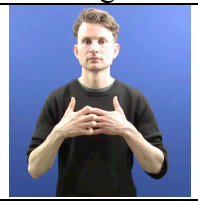
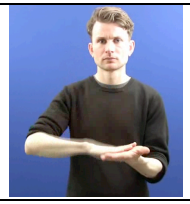
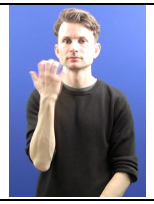
ID Gloss	GREY6	PURPLE4	GREY9	PURPLE4	YELLOW5
Region	Belfast	Bristol	Glasgow	Bristol	Manchester
Variant 1-5					

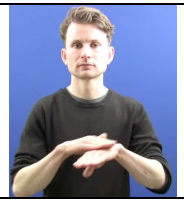
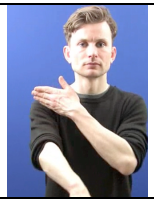
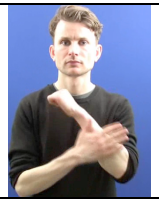
ID Gloss	GREY3	BROWN2	GREEN3	GREY10	GREY5
Region	Newcastle	Cardiff	Cardiff	Glasgow	Bristol
Variant 6-10					

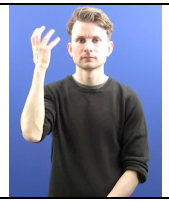
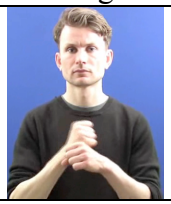
ID Gloss	PURPLE3	BROWN	GREEN8	YELLOW4	BROWN6
Region	Belfast	Manchester	Glasgow	Belfast	Glasgow
Variant 11-15					

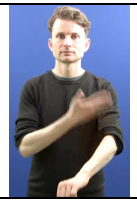
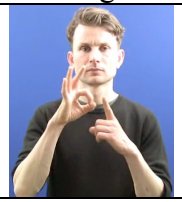
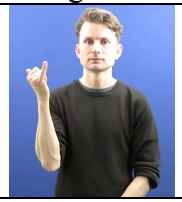
ID Gloss	PURPLE5	PURPLE6	BROWN5	GREEN7	BROWN
Region	Glasgow	London	Bristol	Glasgow	London
Variant 16-20					

ID Gloss	GREY4	GREY2	GREY8	GREEN4	PURPLE2
Region	Cardiff	Manchester	Belfast	Newcastle	Newcastle
Variant 21-25					

ID Gloss	GREEN5	PURPLE2	GREEN2	GREY11	YELLOW2
Region	Birmingham	Manchester	Bristol	Cardiff	London
Variant 26-30					

ID Gloss	BROWN4	GREEN6	BROWN	GREEN	BROWN
Region	Bristol	London	Belfast	Belfast	London
Variant 31-35					

ID Gloss	YELLOW3	PURPLE	GREY7	GREY	GREY
Region	Newcastle	Cardiff	Birmingham	Birmingham	London
Variant 36-40					

ID Gloss	GREEN	PURPLE	YELLOW6
Region	Manchester	Birmingham	Glasgow
Variant 41-43			

Appendix F: Multiple logistic regression showing the variants in order of accuracy in th lexical comprehension task (most difficult to understand to easiest to understand)

Variant	Log odds	Tokens	% of correct responses	Centred weight
GREY6	16.193	54	100	>0.999
PURPLE4	16.193	72	100	>0.999
GREY9	1.517	57	94.7	0.82
PURPLE4	1.222	72	93.1	0.772
YELLOW5	1.09	51	92.2	0.748
GREY3	0.909	54	90.7	0.713
BROWN2	0.855	72	90.3	0.702
GREEN3	0.855	72	90.3	0.702
GREY10	0.767	57	89.5	0.683
GREY5	0.706	72	88.9	0.67
PURPLE3	0.531	54	87	0.63
BROWN	0.465	51	86.3	0.614
GREEN8	0.439	57	86	0.608
YELLOW4	0.236	54	83.3	0.559
BROWN6	0.057	57	80.7	0.514
PURPLE5	0.057	57	80.7	0.514
PURPLE6	-0.121	72	77.8	0.47
BROWN5	-0.275	72	75	0.432
GREEN7	-0.344	57	73.7	0.415
BROWN	-0.348	72	73.6	0.414
GREY4	-0.486	72	70.8	0.381
GREY2	-0.498	51	70.6	0.378
GREY8	-0.596	54	68.5	0.355
GREEN4	-0.843	54	63	0.301
PURPLE2	-0.999	54	59.3	0.269
GREEN5	-1.037	72	58.3	0.262
PURPLE2	-1.177	51	54.9	0.236
GREEN2	-1.262	72	52.8	0.221
GREY11	-1.54	72	45.8	0.176
YELLOW2	-1.54	72	45.8	0.176
BROWN4	-1.597	72	44.4	0.168
GREEN6	-1.597	72	44.4	0.168
BROWN	-1.748	54	40.7	0.148
GREEN	-1.984	54	35.2	0.121
BROWN	-2.005	72	34.7	0.119
YELLOW3	-2.067	54	33.3	0.112
PURPLE	-2.13	72	31.9	0.106
GREY7	-2.261	72	29.2	0.094
GREY	-2.399	72	26.4	0.083
GREY	-3.198	72	13.9	0.039
GREEN	-3.212	51	13.7	0.039
PURPLE	-3.319	72	12.5	0.035
YELLOW6	-3.513	57	10.5	0.029

Appendix G: The number of variants elicited per participant in the lexical elicitation task in Study 2

ID codes	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	TOTAL
Black	1	2	2	2	1	1	1	2	3	2	1	1	1	1	1	2	1	2	1	1	2	1	1	1	1	35
Blue	1	2	3	1	1	1	2	4	3	2	2	2	3	2	2	3	1	1	5	1	1	2	1	1	1	48
Brown	1	2	2	1	1	1	1	3	2	1	1	1	2	1	1	2	1	1	2	1	1	2	1	2	2	36
Eighteen	1	2	3	1	1	2	1	1	3	2	2	2	2	2	2	3	1	1	3	2	3	2	2	1	2	47
Four	2	1	1	2	1	2	1	1	1	1	1	1	2	2	2	2	1	1	1	1	1	1	1	1	1	32
Green	1	1	2	1	1	1	3	2	3	3	3	2	2	2	2	2	1	1	1	1	2	2	2	1	2	44
Grey	2	1	2	1	1	2	2	2	2	2	2	1	2	2	1	2	1	1	2	1	1	2	1	1	2	39
Nine	1	4	3	1	1	3	2	2	2	2	2	2	2	2	2	3	1	1	3	2	1	2	2	2	2	50
Orange	1	1	1	1	1	1	1	1	2	1	1	2	1	1	1	2	1	1	1	1	1	1	1	1	1	28
Pink	1	1	1	1	1	1	2	2	3	2	1	2	2	2	1	2	1	1	2	2	2	2	1	1	1	38
Purple	2	3	2	1	1	1	3	1	2	2	2	2	2	2	2	1	1	1	1	1	2	2	1	1	1	40
Red	1	1	2	1	2	2	1	2	1	1	1	1	1	1	1	2	1	1	2	1	3	2	2	1	2	36
Seventeen	1	3	3	1	1	2	1	1	3	2	2	2	2	2	2	2	1	1	3	2	1	2	2	1	2	45
Six	1	3	2	1	1	3	3	2	2	3	3	3	2	2	2	3	1	1	3	2	3	3	3	1	2	55
Sixteen	1	2	2	1	1	2	2	2	3	2	2	2	2	2	2	3	1	1	3	2	2	3	3	2	2	50
Ten	4	3	3	1	1	3	2	4	3	3	2	2	4	2	2	3	1	1	2	2	2	2	2	3	2	59
Twelve	1	2	3	1	1	2	1	1	3	2	2	1	2	2	2	2	1	1	1	2	2	2	2	2	2	43
White	1	2	2	1	1	2	3	2	3	2	2	2	1	2	2	2	1	1	1	2	2	2	1	1	1	42
Yellow	1	3	3	1	1	2	3	2	3	2	2	2	2	2	1	2	1	1	2	2	2	2	2	1	2	47
TOTAL	25	39	42	21	20	34	35	37	47	37	34	33	37	34	31	43	19	20	39	29	34	37	31	25	31	

6 References

Adank, P., Evans, B., Stuart-Smith, J., & Scotti, S. (2009). Comprehension and unfamiliar native accents under adverse listening conditions. *Jour Experimental Psychology: Human Perception and Performance*, *35*(2

Adey, P. (2010). *Mobility*. Abingdon: Routledge.

Allsop, L. (1993). The International Sign Project. In R. Fischer & T. Vollh *Collage: Works on International Deaf History* (pp. 21–28). Hamburg:

Allsop, L., Woll, B., & Brauti, J. M. (1995). International Sign: The Creati International Deaf Community and Sign Language. *Sign Language Re* (Bos, Helee., pp. 171–188). Hamburg.

Allwood, J., & Ahlsén, E. (1986). Lexical Convergence and Language Acq O. Dahl (Ed.), *Papers from the Ninth Scandinavian Conference of Lin* Stockholm: University of Stockholm, Department of Linguistics.

Alshangiti, W., & Evans, B. (2011). Regional Accent Accommodation in S Speech: Evidence for Long-term Accent Change. *Proceedings of the International Congress of Phonetic Sciences*. Hong Kong, China.

Altendorf, U. (2003). *Estuary English*. Turbingen: Gunter Narr Verlag.

Anderson, L. B. (1979). Sign Language Number Systems and the Numeric In B. Frokyaer-Jensen (Ed.), *Sciences of Deaf Signing* (pp. 1–34). Cop University of Copenhagen.

Ann, J. (1996). On the Relation between Ease of Articulation and Frequenc Occurrence of Handshapes in Two Sign Languages. *Lingua*, *98*, 19–4

Aramburo, A. (1989). Sociolinguistic aspects of the Black deaf community (Ed.), *The Sociolinguistics of the Deaf Community* (pp. 103–119). San Academic Press.

Argyle, M., Lalljee, M., & Cook, M. (1968). The effects of visibility on int dyad. *Human Relations*, *21*, 3–17.

Armstrong, N. (2001). *Social and Stylistic Variation in Spoken French: A Approach*. Amsterdam: Benjamins.

Ash, S. (2002). Social Class. In J. K. Chambers, P. Trudgill, & N. Schiling *The Handbook of Language Variation and Change* (pp. 402–422). Ox Blackwell.

Auer, P., & Hinskens, F. (2005). The Role of Interpersonal Accommodatio of Language Change. In P. Auer, F. Hinskens, & P. Kerswill (Eds.), *D Change: Convergence and Divergence in European Languages* (pp. 3 Cambridge: Cambridge University Press.

Baayen, R. H., Davidson, D. J., & Bates, D. M. (2008). Mixed Effects Mod Crossed Random Effects for Subjects and Items. *Journal of Memory a Language*, *59*, 390–412.

Babel, M. (2010). Dialect Divergence and Convergence in New Zealand E *Language in Society*, *39*, 437–456.

Bailey, G., Wikle, T., Tillery, J., & Sand, L. (1991). The Apparent Time Co *Language Variation and Change*, *3*, 241–264.

Baker, R., & Hazan, V. (2011). DiapixUK: Task Materials for the Elicitatio Multiple Spontaneous Speech Dialogs. *Behavior Research Methods*, *4* 770.

Barr, D. J., & Keysar, B. (2002). Anchoring Comprehension in Linguistic I *Journal of Memory and Language*, *46*, 391–418.

Battison, R. (1974). Phonological Deletion in American Sign Language. *Sign Language Studies*, *5*, 1–19.
Battison, R. (1978). *Lexical Borrowing in American Sign Language*. Silver Spring, MD: Linstok Press.
Battison, R., & Jordan, J. K. (1976). Cross-Cultural Communication with Foreign Signers: Fact or Fancy. *Sign Language Studies*, *10*, 1–19.
Bauer, L. (2008). A Question of Identity: A Response to Trudgill. *Language in Society*, *37*(2), 270–273.
Bayard, D. (1989). "Me say that? No way!": The Social Correlates of American Lexical Diffusion in New Zealand English. *Te Reo*, *32*, 17–60.
Bayley, R. (2002). The Quantitative Paradigm. In J. K. Chambers, P. Trudgill, & N. Schiling-Estes (Eds.), *The Handbook of Language Variation and Change* (pp. 312–322). Oxford: Blackwell.
BBC Voices. (2008). BBC Voices. Retrieved October 21, 2010, from http://www.bbc.co.uk/voices/
Beal, J. C. (2010). *An Introduction to Regional Englishes: Dialect Variation in England*. Edinburgh: Edinburgh University Press.
Beal, J. C., & Burbano-Elizondo, L. (2012). "All the Lads and Lasses": Lexical Variation in Tyne and Wear. *English Today*.
Beal, J. C., Burbano-Elizondo, L., & Llamas, C. (2012). *Dialects of English Urban North-Eastern English: Tyneside to Teeside*. Edinburgh: Edinburgh University Press.
Bell, A. (1984). Language Style as Audience Design. *Language in Society*, *13*, 145–204.
Bell, A. (2001). Back in Style: Reworking Audience Design. In P. Eckert & R. Rickford (Eds.), *Style and Sociolinguistic Variation* (pp. 139–169). Cambridge: Cambridge University Press.
Berman, R. A., & Olshtain, E. (1983). Features of First Language Transfer in Second Language Attrition. *Applied Linguistics*, *4*, 222–234.
Bernieri, F. J., Reznick, J. S., & Rosenthal, R. (1988). Synchrony, Pseudo-synchrony, and Dissynchrony: Measuring the Entrainment Process in Mother-Infant Interactions. *Journal of Personality and Social Psychology*, *54*, 243–253.
Bilous, F. R., & Krauss, R. M. (1988). Dominance and Accommodation in the Conversational Behaviours of Same- and Mixed-Gender Dyads. *Language and Communication*, *8*, 183–194.
Blommaert, J. (2010). *The Sociolinguistics of Globalization*. Cambridge: Cambridge University Press.
Bloomfield, L. (1933). *Language*. New York: Henry Holt.
Boberg, C. (2010). *The English Language in Canada*. Cambridge: Cambridge University Press.
Bock, J. K. (1986). Syntactic persistence in language production. *Cognitive Psychology*, *18*, 355–387.
Bock, J. K., & Loebell, H. (1990). Framing sentences. *Cognition*, *35*, 1–39.
Bonvillian, R. J., & Folven, J. D. (1993). Sign Language Acquisition: Developmental Aspects. In M. Marschark & D. M. Clark (Eds.), *Psychological Perspective on Deafness* (pp. 229–265). Hillsdale, NJ: Lawrence Erlbaum Associates.
Bortfeld, H., & Brennan, S. E. (1997). Use and Acquisition of Idiomatic Expressions in Referring by Native and Non-native Speakers. *Discourse Processes*, *23*(2), 119–147.

Boudreault, P., & Mayberry, R. I. (2006). Grammatical processing in American Sign Language: Age of first-language acquisition effects in relation to syntactic structure. *Language and Cognitive Processes*, *21*(5), 608–635.
Bourhis, R. Y., & Giles, H. (1977). The Language of Intergroup Dictinctiveness. In H. Giles (Ed.), *Language, Ethnicity, and Intergroup Relations* (pp. 119–135). London: Academic Press Limited.
Boyes Braem, P., & Sutton-Spence, R. (2001). *The Hands are the Head of the Mouth: The Mouth as Articulator in Sign Language (Volume 39)*. Hamburg: Signum Press.
Branigan, H. P., Pickering, M. J., & Cleland, A. A. (2000). Syntactic coordination in dialogue. *Cognition*, *75*, B13–B25.
Brennan, M. (1990). *Word Formation in British Sign Language*. Stockholm: University of Stockholm Press.
Brennan, M. (1992). Visual World of BSL: An Introduction. In D. Brien (Ed.), *Dictionary of British Sign Language/English* (pp. 1–133). London: Faber and Faber.
Brennan, S. E., & Clark, H. H. (1996). Conceptual pacts and lexical choice in conversation. *Journal of experimental psychology. Learning, memory, and cognition*, *22*(6), 1482–93.
Brentari, D. (1998). *A Prosodic Model of Sign Language Phonology*. London: The MIT Press.
Brien, D. (1992). *Dictionary of British Sign Language/English*. London: Faber and Faber.
Bright, W. (1997). Social Factors in Language Change. In F. Coulmas (Ed.), *The Handbook of Sociolinguistics* (pp. 81–91). Oxford: Blackwell.
Britain, D. (n.d.). The heterogenous homogenisation of dialects in England. *Taal en Tongval*.
Britain, D. (2002). Space and Spatial Diffusion. In J. K. Chambers, P. Trudgill, & N. Schiling-Estes (Eds.), *The Handbook of Language Variation and Change* (pp. 603–637). Oxford: Blackwell.
Britain, D. (2010). Supralocal Regional Dialect Levelling. In C. Llamas & D. Watt (Eds.), *Language and Identities* (pp. 193–204). Edinburgh: Edinburgh University Press.
Britain, D. (2012). The role of mundane mobility and contact in dialect death and dialect birth. In D. Schreier & M. Hundt (Eds.), *English as a Contact Language*. Cambridge: Cambridge University Press.
British Library. (2010). Sounds Familiar? http://www.bl.uk/copyrightstatement.html. Retrieved March 20, 2012, from http://www.bl.uk/learning/langlit/sounds/
BSL Broadcasting Trust. (2012). The Hub Series 2 Programme 2. BSL Zone. Retrieved from http://www.bslzone.co.uk/bsl-zone/the-hub-2-programme-2/
Buchstaller, I., & D'Arcy, A. (2009). Localised Globalization: A Multivariate Investigation of Quotative Be Like. *Journal of Sociolinguistics*, *13*(3), 291–331.
Burbano-Elizondo, L. (2001). *Lexical Erosion and Lexical Innovation in Tyne and Wear*. University of Newcastle.
Burns, S., Matthews, P. A., & Nolan-Conroy, E. (2001). Language Attitudes. In C. Lucas (Ed.), *The Sociolinguistics of Sign Languages* (pp. 181–217). Cambridge: Cambridge University Press.
Carranza, M. A., & Ryan, E. B. (1975). Evaluative reactions to bilingual Anglo and Mexican American adolescents toward speakers of English and Spanish. *International Journal of the Sociology of Language*, *6*, 83–104.

Carroll, J. M. (1980). Naming and Describing in Social Communication. *Language and Speech*, *23*, 309–322.
Carvalho, A. M. (2004). I speak like the guys on TV: Palatalization and the urbanization of Uruguayan Portugese. *Language Variation and Change*, *16*, 127–151.
Casad, E. H. (1974). *Dialect Intelligibility Testing*. Norman, OK: Summer Institute of Linguistics, University of Oklahoma.
Chambers, J. K. (1992). Dialect Acquisition. *Language*, *68*(4), 673–705.
Chambers, J. K. (1998). TV makes people sound the same. In L. Bauer & P. Trudgill (Eds.), *Language Myths* (pp. 123–131). London: Penguin.
Chambers, J. K. (1999). Converging features in the Englishes of North America. *Cuadernos de Filologia Inglesa*, *8*, 117–127.
Chambers, J. K. (2000). Region and Language Variation. *English World-wide*, *21*, 1–31.
Chambers, J. K. (2004). "Canadian Dainty": the rise and decline of Briticisms in Canada. In R. Hickey (Ed.), *The Legacy of Colonial English: A Study of Transported Dialects* (pp. 224–241). Cambridge: Cambridge University Press.
Chartrand, T. L., & Bargh, J. A. (1999). The Chameleon Effect: The Perception-Behavior Link and Social Interaction. *Journal of Personality and Social Psychology*, *76*, 893–910.
Chen, Y., & Tai, J. H.-Y. (2009). Lexical Variation and Change in Taiwan Sign Language. In J. H.-Y. Tai & J. Tsay (Eds.), *Taiwan Sign Language and Beyond* (pp. 131–148). Chia-Yi, Taiwan: The Taiwan Institute for the Humanities, National Chung Cheng University.
Cheshire, J. (1981). Variation in the use of ain't in an urban British English dialect. *Language and Society*, *10*, 365–381.
Cheshire, J. (2002). Sex and Gender in Variationist Research. In J. K. Chambers, P. Trudgill, & N. Schilling-Estes (Eds.), *The Handbook of Language Variation and Change* (pp. 423–443). Oxford: Blackwell.
Chistovich, L. A., Fant, G., De Serpa-Leitao, A., & Tjernlund, P. (1966). Mimicking of Synthetic Vowels. *Q. Prog. Status Rep.*, (2), 1–18.
Clark, H. H., & Carlson, T. B. (1981). Context for Comprehension. In J. Long & A. Baddeley (Eds.), *Attention and Performance IX* (pp. 313–331). Hillsdale, NJ: Lawrence Erlbaum Associates.
Clark, H. H., & Murphy, G. L. (1982). Audience Design in Meaning and Reference. In J. F. LeNy & W. Kintsch (Eds.), *Language and Comprehension* (pp. 287–299). Amsterdam: North-Holland.
Clark, H. H., & Wilkes-Gibbs, D. (1986). Referring as a Collaborative Process. *Cognition*, *22*, 1–39.
Clopper, C. G., & Bradlow, A. R. (2008). Perception of Dialect Variation in Noise: Intelligibility and Classification. *Language and Speech*, *51*(3), 175–198.
Clopper, C. G., & Pisoni, D. B. (2004). Effects of Talker Variability on Perceptual Classification of Dialect Variation. *Language and Speech*, *47*, 207–239.
Clopper, C. G., & Pisoni, D. B. (2007). Free classification of regional dialects of American English. *Journal of Phonetics*, *35*, 421–438.
Coates, J. (1994). No gap, lots of overlap: Turn-taking pattens in the talk of women friends. In D. Graddol, J. Maybin, & B. Stierer (Eds.), *Researching Language and Literacy in Social Context* (pp. 177–192). Clevedon: Multilingual Matters Ltd.
Coates, J., & Sutton-Spence, R. (2001). Turn-taking Patterns in Deaf Conversation. *Journal of Sociolinguistics*, *5*(4), 507–529.
Collins-Ahlgren, M. (1989). *Aspects of New Zealand Sign Language*. Victoria University of Wellington, New Zealand.

Cormier, K., Fenlon, J., Johnston, T., Rentelis, R., Schembri, A., Rowley, K., Adam, R., et al. (2012). From Corpus to Lexical Database to Online Dictionary: Issues in Annotation of the BSL Corpus and the Development of BSL SignBank. In O. Crasborn, E. Efthimiou, E. Fotinea, T. Hanke, J. Kristoffersen, & J. Mesch (Eds.), *5th Workshop on the Representation of Sign Languages: Interactions between Corpus and Lexicon [workshop part of 8th International Conference on Language Resources and Evaluation, LREC 2012* (pp. 7–12). Turkey, Istanbul: Paris: ELRA.

Cormier, K., Fenlon, J., Rentelis, R., & Schembri, A. (2011). Lexical Frequency in British Sign Language Conversation: A Corpus-Based Approach. *Proceedings of the Conference on Language Documentation and Linguistic Theory 3 (LDLT3)*. London: School of Oriental and African Studies.

Cormier, K., Schembri, A., Vinson, D., & Orfanidou, E. (2012). First Language Acquisition differs from Second Language Acquisition in Prelingually Deaf Signers: Evidence from Sensitivity to Grammaticality Judgement in British Sign Language. *Cognition*, *124*, 50–65.

Coupland, N. (1984). Accommodation at Work: Some Phonological Data and their Implications. *International Journal of Sociology of Language*, *46*, 49–70.

Coupland, N. (2008). The Delicate Constitution of Identity in Face-to-face Accommodation: A Response to Trudgill. *Language in Society*, *37*(2), 267–270.

Crasborn, O., & Sloetjes, H. (2008). Enhanced ELAN functionality for sign language corpora. *Proceedings of 3rd Workshop on the Representation and Processing of Sign Languages: Construction and Exploitation of Sign Language Corpora* (pp. 39–43).

Crasborn, O., Van der Kooij, E., Waters, D., Woll, B., & Mesch, J. (2008). Frequency Distribution and Spreading Behavior of Different Types of Mouth Actions in Three Sign Languages. *Sign Language & Linguistics*, *11*(1), 45–67.

Croft, W. (2000). *Explaining Language Change: An Evolutionary Approach*. London: Longman.

Dekesel, K. (1996). *The Standardisation of BSL: A Purely Linguistic Exercise?* Wolverhampton.

Dekesel, K. (2004). Enemy at the Gates. The Future of BSL: Towards One Variety or a Variety of Sign Languages? *Presentation at Identity, Community, Discourse: English in International Settings Conference*. Turin.

Delvaux, V., & Soquet, A. (2007). The Influence of Ambient Speech on Adult Speech Productions through Unintentional Imitation. *Phonetica*, *64*, 145–173.

Deuchar, M. (1978). Diglossia and British Sign Language. Sociolinguistic Working Paper Number 46. Washington, D.C.

Deuchar, M. (1981). Variation in British Sign Language. In B. Woll, J. G. Kyle, & M. Deuchar (Eds.), *Perspectives on British Sign Language and Deafness* (pp. 109–119). Guildford: Billing and Sons Ltd.

Dye, M. W. G., & Shih, S.-I. (2006). Phonological priming in British Sign Language. In L. Goldstein, D. H. Whalen, & C. T. Best (Eds.), *Laboratory Phonology 8* (pp. 243–263). Berlin: Mouton de Gruyter.

Eckert, P. (1997). Age as a Sociolinguistic Variable. In F. Coulmas (Ed.), *The Handbook of Sociolinguistics* (pp. 151–167). Oxford: Blackwell.

Eckert, P. (2000). *Linguistic Variation as a Social Practice*. Malden, Mass.: Blackwell.

Eckert, P. (2003). Elephants in the room. *Journal of Sociolinguistics*, *7*(3), 392–397.

Eckert, P. (2012). Three Waves of Variation Study: The Emergence of Meaning in the Study of Sociolinguistic Variation. *Annual Review of Anthropology*, *41*, 87–100.

Eckert, P., & McConnell-Ginet, S. (1992). Think Practically and Look Locally: Language and Gender as Community-Based Practice. *Annual Review of Anthropology*, *21*, 461–490.
Edinburgh and East of Scotland Society for the Deaf. (1985). *Seeing the Signs! in Scotland*. Edinburgh: Lindsay and Co. Ltd.
Eichmann, H. (2009). Planning Sign Languages: Promoting Hearing Hegemony? Conceptualising Sign Language Standardization. *Current Issues in Language Planning*, *10*(3), 293–307.
Eichmann, H., & Rosenstock, R. (2012). Schools, dialects and school dialects: New perspectives on regional variation in German Sign Language. *Presentation at the Sociolinguistics Symposium 19 conference, Freie Universitat Berlin*. Berlin.
Elton, F. (2006). Changes to Regional Variations in BSL. *Sign Community Magazine*, 10–11.
Elton, F. (2010). *Changing the Way we Sign: An Analysis of the Signing Style used by Translators in the Queen's Christmas Speech since the 1980s*. Birkbeck College, University of London.
Elton, F., & Squelch, L. (2008). *British Sign Language: London and South-East Regional Signs*. London: Lexisigns.
Emmorey, K., Bosworth, R., & Kraljic, T. (2009). Visual Feedback and Self-Monitoring of Sign Language. *Journal of Memory and Language*, *61*(3), 398–411.
Emmorey, K., Korpics, F., & Petronio, K. (2009). The Use of Visual Feedback During Signing: Evidence from Signers with Impaired Vision. *Journal of Deaf Studies & Deaf Education*, *14*(1), 99–104.
Evans, B., & Alshangiti, W. (2011). Investigating the Effects of Regional Accent Background on the Phonetic Alignment in Spontaneous Speech. *Presentation at the Speech Sciences Forum, University College London*.
Evans, B., & Iverson, P. (2007). Plasticity in Vowel Perception and Production: A Study of Accent Change in Young Adults. *Journal of Acoustic Society of America*, *121*(6), 3814–3826.
Fasold, R. (1990). *Sociolinguistics of Language*. Oxford: Blackwell.
Faurot, K., Dellinger, D., Eatough, A., & Parkhurst, S. (1999). The Identity of Mexican Sign as a Language.
Fenlon, J., Rentelis, R., & Schembri, A. (2010). Sociolinguistic Variation in the 1 Handshape in British Sign Language. *Presentation at Theoretical Issues in Sign Language Research (TISLR 10)*. Indiana: Purdue University.
Fenlon, J., Schembri, A., Rentelis, R., & Cormier, K. (2013). Variation in Handshape and Orientation in British Sign Language: The Case of the "1" Hand Configuration. *Language and Communication*, *33*(2013), 69–91.
Ferguson, C. A. (1975). Toward a Characterization of English Foreigner Talk. *Anthropological Linguistics*, *17*(1), 1–14.
Foran, C. (1995). Vincentian Ministry to Deaf People in Scotland. *Contact: Voice of the Irish Deaf Community*, 23.
Fought, C. (2002). Ethnicity. In J. K. Chambers, P. Trudgill, & N. Schilling-Estes (Eds.), *The Handbook of Language Variation and Change* (pp. 444–472). Oxford: Blackwell.
Foulkes, P., & Docherty, G. J. (1999). *Urban Voices: Accent Studies in the British Isles*. London: Arnold.
Francis, W. N. (1983). *Dialectology: An Introduction*. London: Longman.
Frishberg, N. (1975). Arbitrariness and Iconicity: Historical Change in American Sign Language. *Language*, *51*, 696–719.

Fuentes, M., & Tolchinsky, L. (2004). The Subsystem of Numerals in Catalan Sign Language: Description and Examples from a Psycholinguistic Study. *Sign Language Studies*, *5*(1), 94–117.
Garrod, S., & Anderson, A. (1987). Saying what you mean in Dialogue: A Study in Conceptual and Semantic Co-ordination. *Cognition*, *27*, 181–218.
Geraci, C., Battaglia, K., Cardinaletti, A., Donati, C., Giudice, S., & Mereghetti, E. (2011). The LIS Corpus Project: A Discussion of Sociolinguistic Variation in the Lexicon. *Sign Language Studies*, *11*(4), 528–574.
Giles, H. (1970). Evaluatve reactions to accents. *Educational Review*, *22*, 211–227.
Giles, H. (1973). A Model and Some Data. *Anthropological Linguistics*, *15*(2), 87–105.
Giles, H., & Bourhis, R. Y. (1976). Black Speakers with White Speech - a Real Problem? In G. Nickel (Ed.), *Proceedings of the 4th International Congress Applied Linguistics Volume 1* (pp. 575–584). Stuttgart: Hochschul-Verlag.
Giles, H., Coupland, J., & Coupland, N. (1991). *Contexts of Accommodation: Developments in Applied Sociolinguistics*. Cambridge: Cambridge University Press.
Giles, H., Mulac, A., Bradac, J. J., & Johnson, P. (1987). Speech Accommodation Theory: The First Decade and Beyond. In M. McLaughlin (Ed.), *Communication Yearbook Volume 10* (pp. 13–48). Beverly Hills, CA: Sage.
Giles, H., & Powesland, P. F. (1997). Accommodation Theory. In N. Coupland & A. Jaworski (Eds.), *A Sociolinguistics Reader* (pp. 232–239). Basingstoke: Macmillian.
Giles, H., & Smith, P. M. (1979). Accommodation Theory: Optimal Levels of Convergence. In H. Giles & R. St. Clair (Eds.), *Language and Social Psychology*. Oxford: Oxford University Press.
Giles, H., Taylor, D. M., & Bourhis, R. (1973). Towards a Theory of Interpersonal Accommodation through Language: Some Canadian Data. *Language in Society*, *2*(2), 177–192.
Goldin-Meadow, S., & Mylander, C. (1984). Gestural Communication in Deaf Children: The Effects and Non-Effects of Parental Input on Early Language Development. *Monographs of the Society for Research in Child Development*, *49*(3), 207.
Goldinger, S. D. (2000). The Role of Perceptual Episodes in Lexical Processing. *Proceedings of SWAP (Spoken Word Access Processes)*. Nijimegen: Max Planck Institute for Psycholinguistics.
Guggenheim, L. (1993). Ethnic Variation in ASL: The signing of African Americans and how it is influenced by conversational topic. In E. Winston (Ed.), *Communication Forum* (pp. 51–76). Washington, D.C.: Gallaudet University Department of Linguistics & Interpreting.
Hannah, A., & Murachver, T. (1999). Gender and Conversational Style as Predictors of Conversational Behavior. *Journal of Language and Social Psychology*, *18*, 153–174.
Haualand, H. (2007). The Two-Week Village: The Significance of Sacred Occasions for the Deaf Community. In B. Ingstad & S. R. Whyte (Eds.), *Disability in local and global worlds* (pp. 33–55). Berkeley: University of California Press.
Hazan, V., & Baker, R. (2011). Acoustic-phonetic characteristics of speech produced with communicative intent to counter adverse listening conditions. *Journal of the Acoustical Society of America*, *130*(4), 2139–2152.
Hiddinga, A., & Crasborn, O. (2011). Signed Languages and Globalization. *Language in Society*, *40*, 483–505.

Hill, J., & McCaskill, C. (2010). Black and White Signing Space: A Case of Convergence? *New Ways in Analyzing Variation 39 Conference San Antonio, Texas November 4-6*. San Antonio, Texas.
Hiraga, Y. (2005). British Attitudes towards Six Varieties of English in the USA and Britain. *World Englishes*, *24*(3), 289–308.
Holmes, J. (2008). Contact is Not Enough: A Response to Trudgill. *Language in Society*, *37*(2), 273–277.
Houston, A. (1991). A Grammatical Continuum for (ING). In P. Trudgill & J. K. Chambers (Eds.), *Dialects of English: Studies in Grammatical Variation* (pp. 241–257). London: Longman.
Hoyer, K. (2007). Albanian Sign Language: Language Contact, International Sign, and Gesture. In D. Quinto-Pozos (Ed.), *Sign Languages in Contact* (pp. 195–234). Washington, D.C.: Gallaudet University Press.
Hughes, M. (2009). *Social Trends 39*. Basingstoke: Palgrave Macmillan.
Ikeno, A., & Hansen, J. H. L. (2007). The Effect of Listener Accent Background on Accent Perception and Comprehension. *Journal on Audio, Speech and Music Processing*, *2007*(1), 8.
Jackson, P. (1990). *Britain's Deaf Heritage*. East Lothian, Scotland: British Deaf Association.
Jaeger, T. F. (2008). Categorical Data Analysis: Away from ANOVAs (Transformation or Not) and Towards Logit Mixed Models. *Journal of Memory and Language*, *59*, 434–446.
Johnson, E. (1993). The Relationship between Lexical Variation and Language Change. *Language Variation and Change*, *5*, 285–303.
Johnson, R. E., & Liddell, S. (2011). A Segmental Framework for Representing Signs Phonetically. *Sign Language Studies*, *11*(3), 408–463.
Johnston, T. (1989). *Auslan: The Sign Language of the Australian Deaf Community*. University of Sydney.
Johnston, T. (2003). BSL, Auslan and NZSL: Three Signed Languages or One? In A. Baker, B. Van den Bogaerde, & O. Crasborn (Eds.), *Cross-linguistic Perspectives in Sign Language Research, Selected Papers from TISLR 2000* (pp. 47–69). Hamburg: Signum Verlag.
Johnston, T. (2010). From Archive to Corpus: Transcription and Annotation in the Creation of Signed Language Corpora. *International Journal of Corpus Linguistics*, *15*, 106–131.
Johnston, T., & Schembri, A. (2007). *Australian Sign Language (Auslan): An Introduction to Sign Language Linguistics*. Cambridge: Cambridge University Press.
Jordan, I. K., & Battison, R. (1976). A Referential Communication Experiment with Foreign Sign Languages. *Sign Language Studies*, *5*(10), 69–80.
Katseff, S. (2004). From Symbol to System: The Development of Number Signs in Nicaraguan Sign Language. *Presentation at the Theoretical Issues in Sign Language Research (TISLR 8)*. Barcelona.
Keating, E., & Mirus, G. (2003). American Sign Language in Virtual Space: Interactions between deaf users of computer-mediated video communication and the impact of technology on language practices. *Language in Society*, *32*, 693–714.
Kerswill, P. (2002). Koineization and Accommodation. In J. K. Chambers, P. Trudgill, & N. Schilling-Estes (Eds.), *The Handbook of Language Variation and Change* (pp. 669–702). Oxford: Blackwell.

Kerswill, P. (2003). Dialect Levelling and Geographical Diffusion in British English. In D. Britain & J. Cheshire (Eds.), *Social Dialectology: In Honour of Peter Trudgill* (pp. 223–243). Amsterdam: Benjamins.
Kerswill, P. (2006). RP, Standard English and the Standard/Non-standard Relationship. *Language in the British Isles (2nd ed.)* (pp. 1–18). Cambridge: Cambridge University Press.
Knoors, H., & Marschark, M. (2012). Language Planning for the 21st Century: Revisiting Bilingual Language Policy for Deaf Children. *Journal of Deaf Studies and Deaf Education*, *17*, 291–305.
Kozhevnikov, V. A., & Chistovich, L. A. (1965). *Speech Articulation and Perception*. Washington, D.C.: Joint Publications Research Service.
Krauss, R. M., & Weinheimer, S. (1964). Changes in Reference Phases as a Function of Frequency Usage in Social Interaction: A Preliminary Study. *Psychonomic Science*, *1*, 113–114.
Krauss, R. M., & Weinheimer, S. (1966). Concurrent Feedback, Confirmation, and the Encoding of Referents in Verbal Communication. *Journal of Personality and Social Psychology*, *4*, 343–346.
Kuhberg, H. (1992). Longitudinal L2-attrition versus L2-acquisition in three Turkish children: Empirical findings. *Second Language Research*, *25*, 173–227.
Kyle, J., & Allsop, L. (1982). *Deaf People and the Community*. Bristol.
Kyle, J., & Woll, B. (1985). *Sign Language: The Study of Deaf People and their Language*. Cambridge: Cambridge University Press.
Kyle, J., & Woll, B. (1993). *Language in Sign: The Development of Deaf Children's Communication in Sign Language*. Bristol: University of Bristol.
Labov, W. (1962). *The Social History of a Sound Change on the Island of Martha's Vineyard*. Columbia University.
Labov, W. (1972). *Sociolinguistic Patterns*. Philadelphia: University of Pennsylvania Press.
Labov, W. (1990). The Intersection of Sex and Social Class in the Course of Linguistic Change. *Language Variation and Change*, *2*, 205–254.
Labov, W. (1994). *Principles of Linguistic Change: Internal Factors*. Oxford: Blackwell.
Labov, W. (2001). *Principles of Linguistic Change: Social Factors*. Oxford: Blackwell.
Labov, W. (2007). Transmission and Diffusion. *Language*, *83*(2), 344–387.
Labov, W., & Ash, S. (1997). Understanding Birmingham. In C. Berstein, T. Nunnally, & R. Sabino (Eds.), *Language Variety in the Soth Revisited* (pp. 508–573). Tuscaloosa, AL: Alabama University Press.
Ladd, P. (2003). *Understanding Deaf Culture: In Search of Deafhood*. Clevedon: Multilingual Matters Ltd.
Lane, H. (1992). *The Mask of Benevolence: Disabling the Deaf Community*. New York: Alfred A. Knopf.
Langer, G. (2012). A Colorful First Glance at Data on Regiona Variation Extracted from the DGS-Corpus: With a Focus on Procedures. *Workshop Proceedings 5th Workshop on the Representation and Processing of Sign Languages: Interactions between Corpus and Lexicon, Language Resources and Evaluation Conference (LREC)* (pp. 1–9). Istanbul.
Lee, H.-H., Tsay, J., & Myers, J. (2001). Handshape Articulation in Taiwan Sign Language and Signed Chinese. *Proceedings from the Conference on Sign Linguistics, Deaf Education and Deaf Culture in Asia*. Hong Kong, China: University of Hong Kong.

Leeson, L., & Grehan, C. (2004). To the Lexicon and Beyond: The Effect of Gender on Variation in Irish Sign Language. In M. Van Herreweghe & M. Vermeerbergen (Eds.), *To the Lexicon and Beyond: Sociolinguistics in European Deaf Communities* (pp. 39–73). Washington, D.C.: Gallaudet University Press.
LeMaster, B. (2003). School Language and Shifts in Irish Deaf Identity. In L. Monaghan, C. Schmaling, K. Nakamura, & G. H. Turner (Eds.), *Many Ways to be Deaf* (pp. 153–172). Washington, D.C.: Gallaudet University Press.
LeMaster, B. (2006). Language Contraction, Revitalization and Irish Women. *Journal of Linguistic Anthropology*, *16*(2), 211–228.
LePage, R. B., & Tabouret-Keller, A. (1985). *Acts of Identity*. Cambridge: Cambridge University Press.
Leybaert, J., & Van Cutsem, M. (2002). Counting in Sign Language. *Journal of Experimental Child Psychology*, *81*, 482–501.
Liddell, S., & Johnson, R. E. (1989). American Sign Language: The Phonological Base. *Sign Language Studies*, *64*, 197–277.
Llamas, C., Watt, D., & Johnson, D. E. (2009). Linguistic Accommodation and the Salience of National Identity Markers in a Border Town. *Journal of Language and Social Psychology*, *28*(4), 381–407.
Lodge, R. A. (2004). *A Sociolinguistic History of Parisian French*. Cambridge: Cambridge University Press.
Lucas, C., Bayley, R., Reed, R., & Wulf, A. (2001). Lexical Variation in African American and White Signing. *American Speech*, *76*(4), 339–360.
Lucas, C., Bayley, R., & Valli, C. (2001). *Sociolinguistic Variation in American Sign Language*. Washington, D.C.: Gallaudet University Press.
Lucas, C., Goeke, A., Briesacher, R., & Bayley, R. (2007). Phonological Variation: 2 Hands or 1? *Presentation at New Ways in Analyzing Variation 36*. Philadelphia: University of Pennsylvania.
Lucas, C., & Valli, C. (1992). *Language Contact in the American Deaf Community*. London: Academic Press Limited.
Macafee, C. (1994). *Traditional Dialect in the Modern World: A Glasgow Case Study*. Berlin: Peter Lang.
Magill, R., & Hodgson, A. (2003). *Start to Sign!* London: RNID.
Marschark, M. (2007). *Raising and Educating a Deaf Child: A Comprehensive Guide to the Choices, Controversies, and Decisions faced by Parents and Educators* (2nd ed.). Oxford: Oxford University Press.
Matthews, P. A. (1996). *The Irish Deaf Community Volume 1: Survey Report, History of Education, Language and Culture*. Dublin: Linguistics Institute of Ireland.
Max Planck Institute for Psycholinguistics, N. (2012). ELAN. Retrieved from http://www.lat-mpi.eu/tools/elan/
Mayberry, R. I. (1993). First-Language Acquisition After Childhood Differs From Second-Language Acquisition: The Case of American Sign Language. *Journal of Speech and Hearing Research*, *36*, 1258–1270.
Mayberry, R. I., & Witcher, P. (2005). What Age of Acquisition Effects Reveal about the Nature of Phonological Processing. *CRL Technical Reports*, *17*(3), 1–9.
McCann, R. M., & Giles, H. (2007). Age-Differentiated Communication in Organizations: Perspectives from Thailand and the United States. *Communication Research Reports*, *24*(1), 1–12.
McCaskill, C., Lucas, C., Bayley, R., Hill, J., Dummett-King, R., Baldwin, P., & Hoque, R. (2011). *The Hidden Treasure of Black ASL: Its History and Structure*. Washington, D.C.: Gallaudet University Press.

McCaskill, Carolyn, Lucas, C., Bayley, R., & Hill, J. (2011). *The Hidden Treasure of Black ASL: Its History and Structure*. Washington, D.C.: Gallaudet University Press.
McHugo, G. J., Lanzetta, J. T., Sullivan, D. G., Masters, R. D., & Englis, B. G. (1985). Emotional Reactions to a Political Leader's Expressive Displays. *Journal of Personality and Social Psychology*, *49*, 1513–1529McHugo, G. J., Lanzetta, J. T., Sullivan,.
McKee, D., McKee, R., & Major, G. (2011). Numeral Variation in New Zealand Sign Language. *Sign Language Studies*, *12*(1), 72–97.
McKee, R., & McKee, D. (2011). Old Signs, New Signs, Whose Signs? Sociolinguistic Variation in the NZSL Lexicon. *Sign Language Studies*, *11*(4), 485–527.
McKee, R., & Napier, J. (2002). Interpreting into International Sign Pidgin: An Analysis. *Sign Language & Linguistics*, *5*(1), 27–54.
McKee, R., Schembri, A., McKee, D., & Johnston, T. (2011). Variable "subject" presence in Australian Sign Language and New Zealand Sign Language. *Language Variation and Change*, *23*(3), 375–398.
McMahon, A. (1994). *Understanding Language Change*. Cambridge: Cambridge University Press.
Merseyside Society for Deaf People. (2009). *Liverpool Sign Dictionary*. Merseyside: Merseyside Society for Deaf People.
Meyerhoff, M. (1993). Lexical Shift in Working Class New Zealand English: Variation in the Use of Lexical Pairs. *English World-Wide*, *14*, 231–248.
Meyerhoff, M. (2006). *Introducing Sociolinguistics*. London: Routledge.
Mickelburgh, R., & Syal, R. (2004, March 21). Limp wrists and slant eyes must go as political correctness demands new signs for the deaf. *The Telegraph*. Retrieved from http://www.telegraph.co.uk/news/uknews/1457400/Limp-wrists-and-slant-eyes-must-go-as-political-correctness-demands-new-signs-for-the-deaf.html
Miles, D. (1988). *British Sign Language: A Beginner's Guide*. London: BBC Books.
Milroy, J., Milroy, L., & Hartley, S. (1994). Glottal Stops and Tyneside Glottalisation: Competing Patterns of Variation and Change in British English. *English World-wide*, *15*, 1–33.
Milroy, L. (1980). *Language and Social Networks*. London: Basil Blackwell.
Milroy, L. (2002). Introduction: Mobility, Contact and Language Change - Working with Contemporary Speech Communities. *Journal of Sociolinguistics*, *6*, 3–15.
Milroy, L. (2007). Off the shelf or under the counter? On the social dynamics of sound changes. In C. M. Cain & G. Russom (Eds.), *Studies in the History of the English Language III: Managing Chaos: Strategies for Identifying Change in English* (pp. 149–171). Berlin: Mouton de Gruyter.
Mirus, G., Rathmann, C., & Meier, R. P. (2001). Proximalization and Distalization of Sign Movement in Adult Learners. In V. Dively, M. Metzger, S. Taub, & A. M. Baer (Eds.), *Signed Languages: Discoveries from International Research* (pp. 103–119). Washington, D.C.: Gallaudet University Press.
Mitchell, R. E., & Karchmer, M. A. (2004). Chasing the Mythical Ten Percent: Parental Hearing Status of Deaf and Hard of Hearing Students in the United States. *Sign Language Studies*, *4*(2), 138–163.
Monteillard, N. (2001). La Langue des Signes Internationale. *Acquisition et Interaction en Langue Etrangere*, *15*, 97–115.
Montgomery, C. (2011). Starburst charts: Methods for investigating the geographical perception of and attitudes towards speech samples. *Studies in Variation, Contacts and Change in English*, *7*.

Moorcroft, R., & Gardner, R. C. (1987). Linguistic Factors in Second-Language Loss. *Language Learning*, *37*, 327–340.
Morford, J. P., Wilkinson, E., Villwock, A., Pinar, P., & Kroll, J. F. (2011). When deaf signers read English: Do written words activate their sign translations? *Cognition*, *118*, 286–292.
Mulrooney, K. (2010). *American Sign Language Demystified: A Self-Teaching Guide*. New York: McGraw Hill.
Murray, J. J. (2008). Coequality and Transnational Studies: Understanding Deaf Lives. In H. Dirksen & L. Bauman (Eds.), *Open Your Eyes: Deaf Studies Talking* (pp. 100–110). London: University of Minnesota Press.
Nadasdi, T., Mougeon, R., & Rehner, K. (2008). Factors Driving Lexical Variation in L2 French: A Variationist Study of Automobile, Auto, Voiture, Char and Machine. *French Language Studies*, *18*, 365–381.
Nagy, N. (2011). Lexical Change and Language Contact: Faetar in Italy and Canada. *Journal of Sociolinguistics*, *15*(3), 366–382.
Namy, L. L., Nygaard, L. C., & Sauerteig, D. (2002). Gender Differences in Vocal Accommodation: The Role of Perception. *Journal of Language and Social Psychology*, *21*(4), 422–432.
Napier, M., & Fitzgerald, J. (2008). *British Sign Language for Dummies*. West Sussex: John Wiley and Sons Ltd.
Napoli, D. J., Sanders, N., & Wright, R. (2011). Some Aspects of Ease of Articulation in American Sign Language. *Presented at Stony Brook University*.
Naro, A. J., & Scherre, M. M. P. (1996). Contact with media and linguistic variation. In J. Arnold, R. Blake, B. Davidson, S. Schwenter, & J. Solomon (Eds.), *Sociolinguistic Variation: Data, Theory and Analysis* (pp. 223–228). Stanford: CSLI Publications.
Newport, E. L. (1975). Motherese: The Speech of Mother's to Young Children. In N. J. Castellon, D. B. Pissoni, & G. R. Potts (Eds.), *Cognitive Theory Volume II*. Hillsdale, NJ: Erlbaum.
Niederhoffer, K. G., & Pennebaker, J. W. (2002). Linguistic Style Matching in Social Interaction. *Journal of Language and Social Psychology*, *21*(4), 337–360.
Niedzielski, N., & Preston, D. R. (2003). *Folk Linguistics*. Berlin: Mouton de Gruyter.
Nyaard, L. C., Sommers, M. S., & Pisoni, D. B. (1994). Speech Perception as a Talker-contingent Process. *Psychological Science*, *5*, 42–46.
Office of National Statistics. (2011). 2011 Census: Quick Statistics for England and Wales. Retrieved February 1, 2013, from http://www.ons.gov.uk/ons/rel/census/2011-census/key-statistics-and-quick-statistics-for-wards-and-output-areas-in-england-and-wales/STB-2011-census-quick-statistics-for-england-and-wales-march-2011.html
Olshtain, E. (1989). Is Second Language Attrition the Reversal of Second Language Acquisition? *Studies in Second Language Acquisition*, *11*, 151–165.
Orton, H., & Dieth, E. (n.d.). *Survey of English Dialects*. Leeds: Arnold.
Orton, H., Sanderson, S., & Widdowson, J. D. A. (1978). *The Linguistic Atlas of England*. London: Croom Helm.
Orton, H., & Wright, N. (1974). *A Word Geography of England*. London: Seminar Press.
Padden, C., & Rayman, J. (2004). The Future of American Sign Language. In J. van Cleve & D. Armstrong (Eds.), *The Study of Signed Languages: Essays in Honor of William C. Stokoe* (pp. 247–263). Washington, D.C.: Gallaudet University Press.

Parasnis, I. (1998). *Culture and Language Diversity and the Deaf Experience*. Cambridge: Cambridge University Press.
Pardo, J. S. (2006). On phonetic convergence during conversational interaction. *The Journal of the Acoustical Society of America*, *119*(4), 2382.
Pardo, J. S., Jay, I. C., & Krauss, R. M. (2010). Conversational Role influences Speech Imitation. *Attention, Perception and Psychophysics*, *72*(8), 2254–2264.
Patrick, P., & Metzger, M. (1996). Sociolinguistic Factors in Sign Language Research. In J. Arnold, R. Blake, B. Davidson, S. Schwenter, & J. Solomon (Eds.), *Sociolinguistic Variation: Data, Theory and Analysis* (pp. 229–242). Stanford: CSLI Publications.
Penn, C., Ogilvy-Foreman, D., Goldin, D., & Anderson-Forbes, M. (1992). *Dictionary of South African Signs for Communicating with the Deaf*. Johannesburg: Human Sciences Research Council.
Pickering, M. J., & Garrod, S. (2004). Toward a Mechanistic Psychology of Dialogue. *Behavioral and Brain Sciences*, *27*, 169–226.
Pollitt, K., & Turner, G. (1994). BSL: Who decides? *British Deaf Association News*, 7.
Porter, R. J., & Castellanos, F. X. (1980). Speech Production Measures of Speech Perception: Rapid Shadowing of VCV Syllables. *Journal of the Acoustical Society of America*, *67*, 1349–1356.
Porter, R. J., & Lubker, J. F. (1980). Rapid Reproduction of Vowel-Vowel Sequences: Evidence for a Fast and Direct Acoustic-motor Linkage in Speech. *Journal of Speech and Hearing Research*, *23*, 255–269.
Preston, D. R. (1999). *Handbook of Perceptual Dialectology*. Amsterdam: John Benjamins Publishing Co.
Przedlacka, J. (2002). *Estuary English? A Sociophonetic Study of Teenage Speech in the Home Counties*. Frankfurt: Peter Lang.
Quinn, G. (2010). Schoolization: An Account of the Origins of Regional Variation in British Sign Language. *Sign Language Studies*, *10*(4), 476–501.
Rand, D., & Sankoff, D. (1991). GoldVarb 2.1: A Variable Rule Application for Macintosh. Montreal: Centre de recherches mathematiques.
Rickford, J. R., & McNair-Knox, F. (1994). Addressee- and Topic-Influenced Style Shift: A Quantitative Sociolinguistic Study. In D. Biber & E. Finegan (Eds.), *Sociolinguistic Perspectives on Register* (pp. 35–276). Oxford: Oxford University Press.
Rosenstock, R. (2004). *An Investigation of International Sign: Analysing Structure and Comprehension*. Washington, D.C.: Gallaudet University dissertation.
Safar, A., Meurant, L., Haesenne, T., Nauta, Y. E., De Weerdt, D., & Ormel, E. (n.d.). Mutual Intelligibility among the sign languages of Belgium and the Netherlands. *Linguistics*.
Sankoff, D. (1988). Sociolinguistics and Syntactic Variation. In F. Newmeyer (Ed.), *Language: The Socio-cultural Context* (pp. 140–161). Cambridge: Cambridge University Press.
Schembri, A. (2008). The British Sign Language Corpus Project: Open Access Archives and the Observer's Paradox. *Presented at the Conference on Construction and Exploitation of Sign Language Corpora*. Marrakesh.
Schembri, A. (2010). Documenting Sign Languages. In P. K. Austin (Ed.), *Language Documentation and Description, Volume 7* (pp. 105–143). London: SOAS.
Schembri, A., Cormier, K., Johnston, T., McKee, D., McKee, R., & Woll, B. (2010). Sociolinguistic Variation in British, Australian and New Zealand Sign Language.

In D. Brentari (Ed.), *Sign Languages* (pp. 476–498). Cambridge: Cambridge University Press.
Schembri, A., Fenlon, J., Rentelis, R., & Cormier, K. (2011). British Sign Language Corpus Project: A Corpus of Digital Video Data of British Sign Language 2008-2010 (First Edition). Retrieved from http://www.bslcorpusproject.org
Schembri, A., Fenlon, J., Rentelis, R., Reynolds, S., & Cormier, K. (n.d.). Building the British Sign Language Corpus. *Language Documentation and Conservation*.
Schembri, A., & Johnston, T. (2007). Sociolinguistic Variation in the Use of Fingerspelling in Australian Sign Language: A Pilot Study. *Sign Language Studies*, *7*(3), 319–348.
Schembri, A., McKee, D., McKee, R., Pivac, S., Johnston, T., & Goswell, D. (2009). Phonological Variation and Change in Australian and New Zealand Sign Languages: The Location Variable. *Language Variation and Change*, *21*, 193–231.
Schermer, T. (2004). Lexical Variation in Sign Language of the Netherlands. In M. Van Herrewighe & M. Vermeerbergen (Eds.), *To the Lexicon and Beyond: Sociolinguistics in European Deaf Communities*. Washington, D.C.: Gallaudet University Press.
Schmid, M. S., & De Bot, K. (2003). Language Attrition. In A. Davies & C. Elder (Eds.), *The Handbook of Applied Linguistics* (pp. 210–234). Oxford: Blackwell.
Schmidt, J. (1871). *Zur Geschichte des indogermanischen Vocalismus (Part 1)*. Weimar: H. Bohlau.
Schneider, E. W. (2008). Accommodation versus Identity? A Response to Trudgill. *Language in Society*, *37*, 262–267.
Schneider, W., Eschman, A., & Zuccolotto, A. (2002). *E-Prime Reference Guide*. Pittsburgh, P.A.: Psychology Software Tools.
Schober, M. F., & Clark, H. H. (1989). Understanding by Addressees and Overhearers. *Cognitive Psychology*, *21*(211), 232.
See Hear. (2009a). Stories Behind the Signs, Media Influence. BBC.
See Hear. (2009b). Stories Behind the Signs, International vs. BSL. BBC.
See Hear. (2009c). Stories Behind the Signs, Politically Correct Signs. BBC.
Sellars, K. (1997, June 21). We wanna talk like common people. *Telegraph*. Retrieved from http://www.phon.ucl.ac.uk/home/estuary/sellars.htm
Sidanius, J., & Pratto, F. (1999). Social Dominance Theory: A New Synthesis. *Social Dominance* (pp. 31–57). New York: Cambridge University Press.
Siegel, J. (1985). Koines and Koineization. *Language in Society*, *14*(3), 357–378.
Simmelbauer, A. (2000). *The Dialect of Northumberland*. Heidelberg: Universitatsverlag C. Winter.
Skinner, R. A. (2007). *What Counts? A Typological and Descriptive Analysis of British Sign Language Number Variations*. University of London.
Smith, W. H., & Li-fen, T. (1979). *Your Hands Can Become a Bridge*. Taipei: The Sign Language Club.
Stokoe, W. (1960). Sign Language Structure: An Outline of the Visual Communication Systems of the American Deaf. *Studies in Linguistics*, *8*, 1–41.
Stokoe, W., Casterline, D. C., & Croneberg, C. G. (1965). *A Dictionary of American Sign Language on Linguistic Principle*. Washington, D.C.: Gallaudet University Press.
Strodtbeck, F. L., James, R. M., & Hawkins, C. (1957). Social status in jury deliberations. *American Sociological Review*, *22*, 713–719.
Strodtbeck, F. L., & Mann, R. D. (1956). Sex role differentiation in jury deliberation. *Sociometry*, *19*, 3–11.

Stuart-Smith, J. (2006). The influence of the media. In C. Llamas, L. Mullany, & P. Stockwell (Eds.), *The Routledge Companion to Sociolinguistics* (pp. 140–148). London: Routledge.
Stuart-Smith, J., Timmins, C., & Tweedie, F. (2007). "Talkin" Jockney'? Variation and Change in Glaswegian Accent. *Journal of Sociolinguistics*, *11*(2), 221–260.
Sutton-Spence, R. (1994). *The Role of the Manual Alphabet and Fingerspelling in British Sign Language*. University of Bristol.
Sutton-Spence, R., & Woll, B. (1999). *The Linguistics of British Sign Language: An Introduction*. Cambridge: Cambridge University Press.
Sutton-Spence, R., Woll, B., & Allsop, L. (1990). Variation and Recent Change in Fingerspelling in British Sign Language. *Language Variation and Change*, *2*, 313–330.
Tagliamonte, S., & D'Arcy, A. (2007). Frequency and Variation in the Community Grammar: Tracking a New Change through the Generations. *Language Variation and Change*, *19*(2), 199–217.
Tagliamonte, S., & Hudson, R. (1999). Be like et al. beyond America: The quotative system in British and Canadian youth. *Journal of Sociolinguistics*, *3*(2), 147–172.
Tajfel, H., & Turner, J. C. (1986). The Social Identity Theory of Inter-Group Behavior. In S. Worchel & L. W. Austin (Eds.), *Psychology of Intergroup Relations*. Chicago: Nelson-Hall.
The Sun Newspaper. (2004, March 22). Sign of times. *The Sun*, p. 8.
The Warnock Report. (1978). Report of the Committee of Enquiry into the Education of Handicapped Children and Young People. Retrieved from http://www.educationengland.org.uk/documents/warnock/
The World Federation of the Deaf. (1975). *Gestuno: International Sign Language of the Deaf*. Helsinki: World Federation of the Deaf.
The World Federation of the Deaf. (2003). *Country Name Sign Book*. Helsinki: World Federation of the Deaf.
Thompson, A. G. (2012). *Mastering BBC Voices: Control and Early Deployment of a Large Lexical Dataset*. The University of Leeds.
Thomson, R., Murachver, T., & Green, J. (2001). Where is the gender in gendered language? *Psychological Science*, *12*, 171–175.
Tickle-Degnen, L., & Rosenthal, R. (1987). Group Rapport and Non-Verbal Behaviour. *Review of Personality and Social Psychology*, *9*, 113–136.
Travis, C. (2007). Genre effects on subject expression in Spanish: Priming in narrative and conversation. *Language Variation and Change*, *19*(2), 101–135.
Trudgill, P. (1983a). Linguistic Change and Diffusion. *On Dialect* (pp. 52–87). Oxford: Blackwell.
Trudgill, P. (1983b). *On Dialect*. New York: New York University Press.
Trudgill, P. (1986). *Dialects in Contact*. Oxford: Basil Blackwell.
Trudgill, P. (1999). *The Dialects of England*. Oxford: Blackwell.
Trudgill, P. (2004). *New-Dialect Formation: The Inevitability of Colonial Englishes*. Edinburgh: Edinburgh University Press.
Trudgill, P. (2006). *Dialects in Contact*. Oxford: Basil Blackwell.
Turner, J. C., & Brown, R. J. (1978). Social Status, Cognitive Alternatives and Intergroup Relations. In H. Tajfel (Ed.), *Differentiation between Social Groups*. London: Academic Press.
Turner, L., & West, R. (2010). *Communication Accommodation Theory*. New York: McGraw Hill.

Tuten, D. N. (2008). Identity Formation and Accommodation: Sequential and Simultaneous Relations. *Language in Society*, *37*, 259–262.
Upton, C., Sanderson, S., & Widdowson, J. D. A. (1987). *Word Maps: A Dialect Atlas of England*. New York: Croom Helm.
Upton, C., & Widdowson, J. D. A. (1996). *An Atlas of English Dialects*. Oxford: Oxford University Press.
Van der Kooij, E. (2001). Weak Drop in Sign Language of the Netherlands. In V. Dively, M. Metzger, S. Taub, & A. M. Baer (Eds.), *Signed Languages: Discoveries from International Research* (pp. 27–42). Washington, D.C.: Gallaudet University Press.
Van Engen, K. J., Baese-Berk, M., Baker, R. E., Choi, A., Kim, M., & Bradlow, A. R. (2010). The Wildcat Corpus of Native- and Foreign-accented English: Communicative Efficiency across Conversational Dyads with varying Language Alignment Profiles. *Language and Speech*, *53*(4), 510–540.
Waters, D., Sutton-Spence, R., Schembri, A., Dury, A., & Kyle, J. (2003). *Deaf People in the Community Project 2, Appendix 6: BSL Variation in DPIC2*. Bristol.
Watson, P. (2009). *British Sign Language of Sheffield*. Sheffield: Paul BSL.
Watt, D. (2002). "I don"t speak with a Geordie accent, I speak, like, the Northern accent': Contact-induced Levelling in the Tyneside Vowel System. *Journal of Sociolinguistics*, *6*(1), 44–63.
Watt, D., Llamas, C., & Johnson, D. E. (2010). Levels of Linguistic Accommodation across a National Border. *Journal of English Linguistics*, *38*(3), 270–289.
Watt, D., & Milroy, L. (1999). Variation in the three Tyneside Vowels: Is this Dialect Levelling? *Urban Voices: Accent Studies in the British Isles* (pp. 44–63). London: Arnold.
Weinreich, U., Labov, W., & Herzog, M. I. (1968). *Empirical foundations for a theory of language change*. University of Texas Press.
Williams, A., & Kerswill, P. (1999). Dialect Levelling: Change and Continuity in Milton Keynes, Reading and Hull. In P. Foulkes & G. Docherty (Eds.), *Urban Voices: Accent Studies in the British Isles* (pp. 141–162). London: Arnold.
Wolfram, W., & Fasold, R. (1974). *The Study of Social Dialects in American English*. Englewood Cliffs, NJ: Prentice-Hall.
Woll, B. (1987). Historical and Comparative Aspects of British Sign Language. In J. Kyle (Ed.), *Sign and School: Using Signs in Deaf Children's Development* (pp. 12–34). Clevedon: Multilingual Matters Ltd.
Woll, B. (1994). The Influence of Television on the Deaf Community in Britain. In I. Ahlgren, B. Bergman, & M. Brennan (Eds.), *Perspectives on Sign Language Use: Papers from the Fifth International Symposium on Sign Language Research: Volume 2* (pp. 293–301). Durham: The International Sign Linguistics Association.
Woll, B., Allsop, L., & Sutton-Spence, R. (1991). *Variation and Recent Change in British Sign Language: Final Report to the ESRC*. Bristol.
Woll, B., Sutton-Spence, R., & Elton, F. (2001). Multilingualism: The Global Approach to Sign Languages. In C. Lucas (Ed.), *The Sociolinguistics of Sign Languages* (pp. 8–32). Cambridge: Cambridge University Press.
Woodward, J. C. (1976). Black Southern Signing. *Language in Society*, *5*(2), 211–218.
Woodward, J. C. (1978). Historical Bases of American Sign Language. In P. Siple (Ed.), *Understanding Language through Sign Language Research* (pp. 333–348). New York: Academic Press Limited.
Wright, J. (1905). *The English Dialect Grammar*. Oxford: Frowde.

Wulf, A., Dudis, P., Bayley, R., & Lucas, C. (2002). Variable Subject Presence in ASL Narratives. *Sign Language Studies*, *3*(1), 54–76.
Zentella, A. C. (1990). Lexical Leveling in Four New York City Spanish Dialects: Linguistic and Social Factors. *Hispania*, *73*(4), 1094–1105.